Governance, Decision-Making and Publicness in Marine Space

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Abstract

This research explores the relationship between the publicness of the sea and the process through which marine development is assessed and consented within England's Marine Spatial Planning (MSP) marine licensing framework. This is undertaken through the use of additional research questions which explore the publicness of marine governance frameworks and the marine development decision making process. The publicness of the sea is also defined and explored. The research uses a case study approach to explore these questions. This is supplemented by analysis of marine policy and legislation, quantitative marine licensing data and additional application case examples to contextualise the case study within the marine licensing decision making process. The main case study focuses on the Goodwin Sands intertidal and subtidal sandbank complex located in the South East Inshore Marine Plan area. By focusing on this area, and a controversial marine licence application for development activity within it, this research explores the multiple representations which produce meaning and value within the Goodwin Sands. The conceptual framework applies the Production of Space thesis to the case study area to help to understand the conflicts present within the case study marine licence application.

The results show that when the representations of a proposed marine development space within application assessment and support documents are limited to categories within the Environmental Impact Assessment process there is a risk of major objection from local publics. The Goodwin Sands is a social space produced through the relationship between its unique physicality, its historical and contemporary uses and its mythology and legend. Whilst these are not material planning considerations, having regard for them within development decision making would help to mitigate objection through working collaboratively with local publics. This research emphasises the need to engage in meaningful public consultation during development consent processes within MSP. This includes identifying affected publics and gaining an understanding of the social and cultural landscape which are given expression through marine development consent objection.

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Dedication

For Heather

You taught me to be curious, strong and independent.

You taught me to think differently and aim to make the world a better place through kindness and understanding.

This thesis is for you.

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Of course my friends and family also deserve immense thanks. Many times I've let the research get to me, and you all probably know far more about aggregate dredging and the Goodwin Sands than you ever wanted to. And far too many marine-based puns too. Learning to accept help has been a tough education, and one I'm still not expert in. Special mention goes to the friend who redefined my discipline as 'seaside studies' and those who shared walks and chats in good times and bad. Finally my unending and heart-felt thanks goes to Alex who I met during my academic maritime adventure. Your support has been overwhelming. You've kept me human during my darkest PhD days. Long may this voyage continue.

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List of Abbreviations

BMAPA	British Marine Aggregate Producers Association
Cefas	Centre for environment, fisheries and aquaculture sciences
CES	Cultural Ecosystem Services
Defra	Department for Environment, Food and Rural Affairs
DHB	Dover Harbour Board
DWDR	Dover Western Dock Revival
EA	Ecosystem Approach
EnvA	Environment Agency (Usually abbreviated to 'EA' but reformatted to avoid confusion within this thesis)
EBA	Ecosystem Based Approach
EBMA	Ecosystem Based Management Approach
EEZ	Exclusive Economic Zone
EFRA	Environment, Food and Rural Affairs
EIA	Environmental Impact Assessment
ES	Environmental Statement
EU	European Union
FOI	Freedom of Information
HE	Historic England (previously English Heritage)
IWCO	Independent World Commission on the Oceans
JNCC	Joint Nature Conservation Committee
KWT	Kent Wildlfie Trust
MARPOL	Maritime Pollution (The International Convention for the Protection of Pollution from Ships 1973 as modified by the Protocol of 1973)
MCAA2009	Marine and Coastal Access Act 2009
MCS	Marine Conservation Society
MCZ	Marine Conservation Zone
MEA	Millennium Ecosystem Assessment
ML	Marine Licence
MLA	Marine Licence Application

MMO	Marine Management Organisation
MPA	Marine Protected Area
MPS	Marine Policy Statement
MSFD	Marine Strategy Framework Directive
MSP	Marine Spatial Planning
NBN	National Biodiversity Network
NCI	National Coastwatch Institution
NDPB	Non-Departmental Public Body
NE	Natural England
NGO	Non-Government Organisation
NIMBY	Not in My Back Yard
Nm	Nautical Mile
NTS	Non-Technical Summary
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic (combines and up-dates the 1972 Oslo Convention on dumping waste at sea and the 1974 Paris Convention on land-based sources of marine pollution)
OWF	Offshore Wind Farm
PA2008	The Planning Act 2008
POMRA	Protection of Military Remains Act
QAVS	Queens Award for Voluntary Service
QUANGO	Quasi-autonomous Non-governmental Organisation
SAC	Special Area of Conservation
SNCB	Statutory Nature Conservation Body
SPA	Special Protected Area
SSSI	Sites of Special Scientific Interest
TH	Trinity House
TSP	Terrestrial Spatial Planning
UK	United Kingdom of Great Britain and Northern Island
UKCS	United Kingdom Continental Shelf
UNCLOS	United Nations Convention for the Law of the Sea

WFD	Water Frameworks Directive
WtP	Willingness to Pay
MHWS	Mean High Water Springs
MLW	Mean Low Water
WW2	World War Two

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Chapter 1. Introduction

1.1. Background to Research

Development at sea in the UK is regulated through the Marine and Coastal Access Act 2010. This legislation and associated policy framework implement marine spatial planning (MSP) into UK law and are seen as a paradigmatic shift from previous marine governance which limited its focus to environmental permitting (Richie & Ellis 2010; Jones 2012; Richie 2014; Boyes 2015). MSP brings terrestrial planning processes into marine space, with the requirement that regional seas have strategic marine plans to manage their future uses to the benefit of a range of receptors and stakeholders (Gilliland & Laffoley 2008; Verma 2010; Kidd & Ellis 2012; Gazzola *et al* 2015; Jay 2016). The establishment of MSP as an independent discipline, rather than a niche specialism of spatial or environmental planning more generally, has led to a wealth of literature in this area. However, the current corpus of research focuses largely on strategic level marine planning rather than the operational development management practice of marine licensing.

Whilst MSP considers the strategic management of marine resources, it is marine licensing through which marine development is consented. Akin to terrestrial planning permission, marine licensing is subject to public objection, albeit with less frequency. This research originated from the desire to understand the complexity of public objections to specific, and notably few, marine licence applications within English waters and the motivations for such objection.

1.2. Research Context

Marine licensing is the mechanism through which offshore development projects are assessed and consented. The determination of marine licences considers the likely impacts of an application on the marine environment using paradigms firmly rooted in the wider spatial planning discipline (Douvere 2008; Douvere & Ehler 2009). Consideration is therefore given to the environmental, economic and social sustainability of a project and predicted impacts must be assessed using a demonstrable and justified evidence aligned to Environmental Impact Assessment

(EIA) processes or Ecosystem Based Approaches (EBA)[1] more holistically (Haughton & Counsell 2004; Pomeroy 2008; Maes 2008; Borger *et al* 2014; Richie 2014 Borger *et al* 2014; Jay *et al* 2016). Ten years since the enactment of the Marine and Coastal Access Act 2009 in the UK over 3,000 marine licence applications have been consented within English waters alone[2]. Whilst the majority of marine licence applications are consented with little or no public concern raised during determination[3], some projects receive intense public concern and scrutiny akin to the most contentious of terrestrial planning applications.

The policy framework documents and associated marine plans which provide strategic direction to development, and other activity, within marine space, aim to provide a valuable and effective framework within which the regulatory practice of marine licensing can operate to best manage the complex multiplicity of marine spatial practices within particular countries' legal and cultural context (Barry *et al* 2008, p70; Jay 2011; Hull 2013; Scarff 2015; Turner & Essex 2016). The viability of this process is assumed within the MSP literature. The assessment of impacts through which the effects of marine development projects are assessed assert that their predictions are based on EIA models of assessment. Whilst EIA as a wider disciple has been subject to numerous revisions to its epistemological approach, in practice these assessments often appear as objectively derived from quantifiable facts which allow regulators to assert that proposed developments result in minimal – or indeed no – negative impact to the marine environment. However, the intangibility of social impacts evades the quantitative assessment methods on which marine licence determinations are made (Rees *et al* 2010; Richie & Ellis 2010; Fletcher *et al* 2014; Potts *et al* 2014; Dominguez-Tejo *et al* 2016). More fundamentally, these pragmatic assessment and decision-making approaches exclude conceptualisation of marine space as anything other than a site in which decisions need to be made. Whilst decision reports can provide

[1] This term, and similar formulations (Ecosystem Approach (EA); Ecosystem-Based Management Approach (EBMA)) are discussed in Chapter 3 and the use of 'EBA' in this thesis is explained.
[2] This number is in addition to the large scale projects, such as offshore wind farms and port developments, consented as Nationally Significant Infrastructure Projects, under The Planning Act 2008 (PA2008).
[3] Indeed, as this research considers, this lack of public comment can assume several conclusions regarding the effectiveness of the marine licensing consultation process.

evidence-based justification to allay public objections, these are of little comfort when it is the very process itself which is being questioned.

Both marine plans and impact assessments use marine science to evidence their assertions, based on 'the best available evidence' (Rees *et al* 2010; Fletcher *et al* 2014; Potts *et al* 2014; Dominguez-Tejo *et al* 2016). Quantitative data acts as grounding for these assertions. For example, the models of the predicted impact of a development on the hydrodynamics of an area can be later confirmed through monitoring. Likewise, the effectiveness of a marine plans intervention regarding the protection of a particular fish species can, resources permitting, be monitored through survey data (Smith & Potts 2005; Pinet 2013; Schiller *et al* 2016). Impacts on social or cultural factors are, however, harder to assess due to their subjective nature. Measuring the impact of a development on wellbeing or identity lends itself to the investigation of the publics included within this sphere of impact. These subjective and fluid concerns lead, in turn, to larger questions regarding the nature of marine space and for whom, or for what, MSP operates (Blount & Pitchon 2007; Tengberg *et al* 2012; Rees *et al* 2010, Fletcher *et al* 2014; Dominguez-Tejo *et al* 2016).

Marine plans, and marine development assessments, include social impact as a sub-category of wider environmental impact or ecosystem based management approaches. Through this, the evolution of MSP from its marine environment protection ancestry can be clearly seen (Jay 2010; Ritchie & Ellis 2010; Potts *et al* 2012). Whilst this approach does benefit 'natural'[4], or physical, marine receptors, these assessment processes, based on wider marine science knowledge, neglects to consider that these assessment techniques themselves are socially produced norms (Jasanoff 2004). These norms operate authoritatively to assuage stakeholder conflict and public objection, however there is little consideration of whether this authority is deserved or desired. Marine space is thus managed on behalf of the public but from a position in which the public itself gains limited access to debates regarding the efficacy of the antecedent assessment and regulatory processes.

[4] The word 'nature' is itself a contested concept which requires unpacking. Literature regarding this is discussed in Chapter 3.

Within this thesis this process related research context is considered in relation to the key concept of publicness. Publicness is defined as the abstract public sphere in which public interest is located. Public interest is defined as defined as “common wellbeing, general welfare or benefit that is controlled and received by all members of society” (Ercan 2010, p24) and ‘public realm’ or ‘public sphere’ concerns “the entire range of places, people and activities that constitute the public dimension of human social life” (Madanipour 2003, p4). This is explored in Chapter 2.

As a spatial planning discipline, marine licensing operates within a space which is both physical *and* imbued with meaning formed from the activities and values which operate within it (Lefebvre 1991; Bremner 2014). Central to this co-production of meaning is the context and the publics which comprise a particular space (Dimendberg 1998; Madanipour 2003; Dovey 2013). Taking marine space as a public space, in virtue of its regulation, access and ownership status (Madanipour 2003), presents an opportunity to reconceptualise the context within which marine licensing operates and to offer critique of the governance and regulatory processes which assert to manage the marine environment as a publicly accountable process.

Focusing on marine licensing, as the regulatory process of marine planning, provides an opportunity to examine the effectiveness of wider MSP and commentary of for who, or indeed for what, these processes are effective.

1.3. Research Questions, Aims and Objectives

This thesis considers the impact of marine development on the publicness of the sea by examining how marine licence applications are determined in the UK within the context of wider MSP principles. The marine environment is defined as a public space and, using public space theories originating within urban design literature, this space is considered as being socially produced. As such, this thesis seeks to understand how the meanings and values of this socially produced public space are considered within marine development consenting, and what this means for the publicness of the sea.

The main aim of this research is to explore how the sea as a public space, and the associated publicness of the sea, are considered within the marine licensing regime

within English waters[5]. As such the objectives are to provide a conceptualisation of marine space as a public space, define the publicness of the sea, and justify why this is beneficial for marine regulators. An additional objective is to provide a detailed case study, of both marine space/place and associated development proposal, evidencing how the publicness of the sea has been encountered within a marine licence application.

This thesis provides the theoretical underpinnings, and primary research to address the following overarching research question:

> **What is the relationship between the publicness of the sea and the process through which marine development is assessed and consented within English marine licensing?**

From this research question the following sub research questions have been identified and are explored within this thesis to allow for the overarching research question to be addressed:

> RQ1. What is 'the publicness of the sea'?
>
> RQ2. How public are the marine development governance frameworks and decision-making processes?

It should be noted here that whilst responding to RQ2 takes up the majority of the text within this thesis, this does not imply its supremacy above RQ1. It is, instead, the case that the complexity of the marine development governance frameworks and decision-making processes cannot be explored in a more concise way. Indeed, this leads to conclusions regarding the publicness of these frameworks and processes, which are explored primary research discussion. To illustrate this, and allow for research related to the formulation of a response to RQ2 to be undertaken in a manageable way, the following sub-division has been utilised:

> RQ2.1. How public are the marine governance institutions and legal and political frameworks within which marine licensing operates?

[5] The limitation of this research to English waters is discussed in Section 1.4.

RQ2.2a. What is the marine development decision-making process?

RQ2.2b. How public is the marine development decision-making process?

Note here that RQ2.2 has been further sub-divided to allow for the decision-making process to be defined before it is critiqued in relation to its publicness.

1.4. Research Strategy and Process

The overarching research strategy employed to explore the research questions and address the aims and objectives stated above was to undertake qualitative case study research. This approach was considered the most suitable due to the detailed investigation of a specific marine space needed in order to consider publicness and the production of space within the marine environment. The research strategy therefore involved the identification of a suitable case study and contextualising this within the policy, legislation and process context of English marine licensing. Limiting the research to a single consenting regime, within its legislative and policy context, allows for a deep exploration of the marine consenting process.

The literature review undertaken for this research utilises academic literature to situate the research within the MSP and EIA disciplines. Public space is explored through the urban design literature and limited marine space literature. This review also draws heavily on academic literature from outside of MSP to explore decision-making within spatial planning and governance more widely. Environmental ethics is also considered here as this forms the moral underpinnings of decision-making.

The empirical research presented within this thesis is limited to an area in English seas in which a contentious marine licence application for aggregate extraction is located. The case study chosen to meet these objectives is geographically located around the Goodwin Sands, a subtidal sand bank located within the South East Inshore marine plan area of English seas (Figure 1.1). Exact physical boundaries for this case study area are deliberately left undefined. This is relevant due to the contested nature of ‘Goodwin Sands’ in relation to its physical attributes.

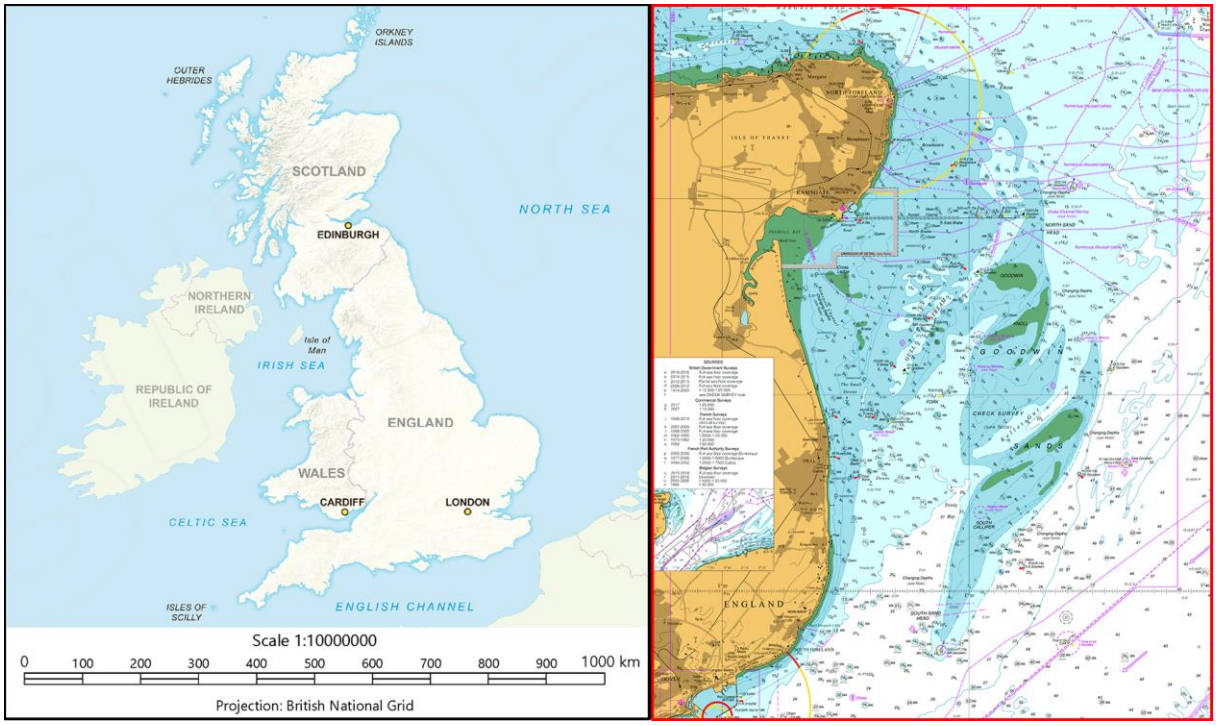

Figure 1.1: Goodwin Sands Location Chart

The empirical research strategy first contextualises 'the problem', which is that current marine licensing processes struggle to account for the publicness of the sea within their decision-making. This is evidenced by the existence of cases such as the Goodwin Sands aggregate licence application and explored using the governance and regulation literature from both within and outside of the marine spatial planning discipline. Secondly, the research argues that the 'marine problem' (Peel & Lloyd 2004) can benefit from a reconceptualization of marine space, and the values attributed to it, which makes explicit use of the Production of Space thesis. This theoretic reconceptualization is undertaken with recourse to the limited marine space literature and the wider body of work within public space theory.

The empirical research utilises a multi-stage strategy. Firstly, the policy and process context for licencing decisions in English waters is explored through analysis of marine policy and legislation relevant to the case study application. Secondly, the marine licence process in England is analysed using both quantitative and qualitative methods; the former allows for the latter to be placed into wider context. In this stage a selection of marine licence applications determined between 2015 and 2017 are

examined as case examples. Thirdly, an in depth case study of the marine licence application for aggregate extraction at the Goodwin Sands is undertaken in order to explore how marine licence decisions are made with reference to a specific case, and how this relates to the findings of the case examples in which considerably less public representation was given. Fourthly, the Goodwin Sands area itself is considered as a case study, thus allowing for an exploration of the multifaceted and often contested stories pertaining to this specific marine spaces and places[6].

Within this research strategy the Production of Space thesis (Lefebvre 1991; Merrifield 2006; Schmid 2008; Bremner 2014) is utilised to provide an explanation as to why conflicts over spatial use – in this case at sea – exist. Extending this urban design thesis into marine space allows for different conceptions, imaginaries (Crawford 2018; Davoudi 2018), or ideological mediations[7] (Lefebvre 1991, p40), to be illustrated as present within a single defined space. The power dynamics contained within these different formulations of spatial descriptions are made explicit within this term (Ibid, p33).

The research strategy is illustrated in Figure 1.2.

[6] As discussed in Chapter 2, space and place provide different conceptualisations of a physical area, and indeed neither are limited to the physical.

[7] The term 'ideological mediation' is given its original meaning as defined by Lefebrve (1991). This term has Marxist origins and implies the use of mediation to exert power. Aligned to the original meaning of this term, it does not necessarily imply that this mediation and exertion of power is a conscious attempt by one party to manipulate others, but rather it is the expression of productive forces within the wider system.

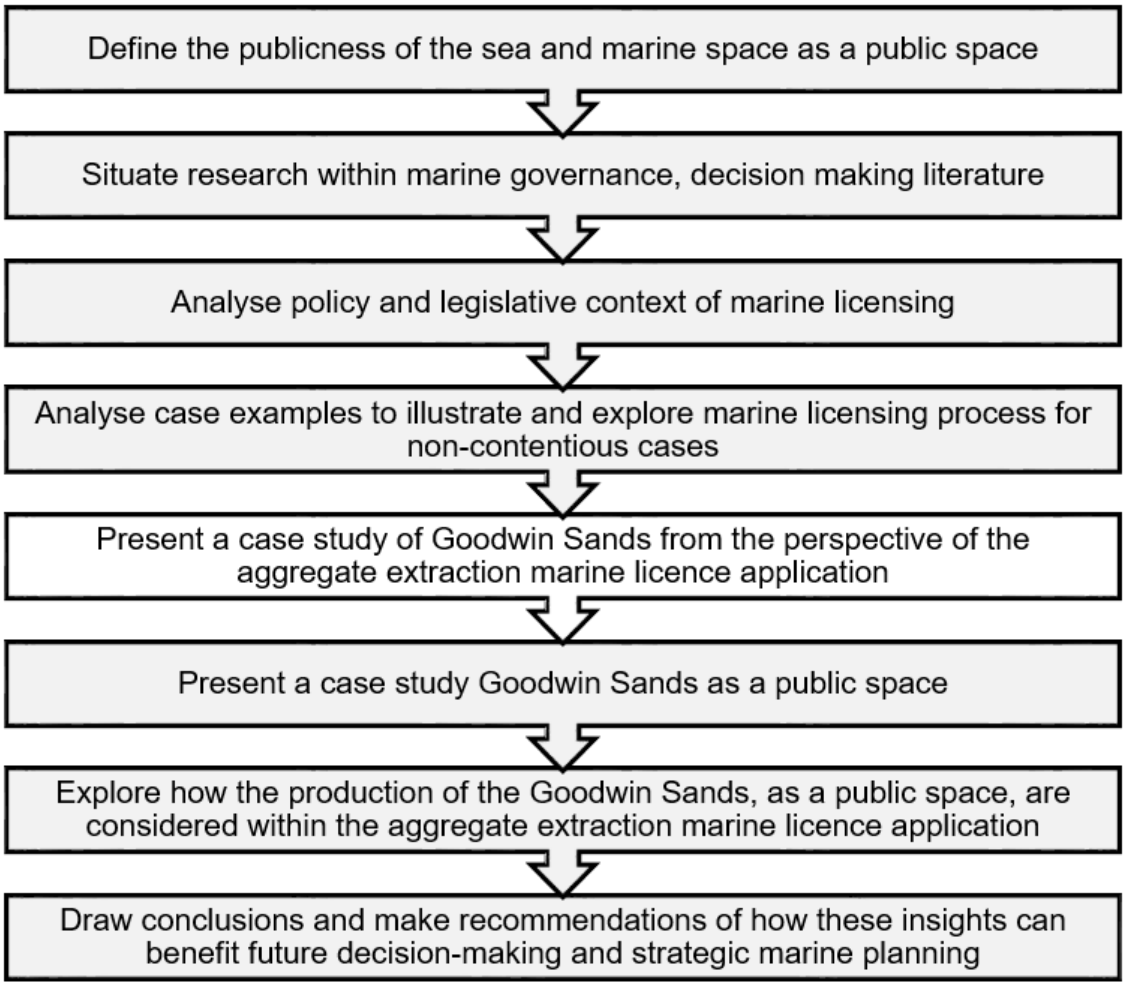

Figure 1.2 Research Strategy

This strategy foregrounds the publicness of the sea and the institutions and processes which manage marine development. The strategy firmly places the case study in both its legislative, policy and regulative process context, and its physical and socio-political context. As such, the conclusions made following discussion of the findings can be seen as relevant not only for the case study area, but also as useful for other areas of conflict within marine licencing and for strategic marine planning more widely.

1.5. Thesis Structure

This thesis is structured using the research questions to identify the research problem being explored and provide findings and discussion in response to this problem. The thesis commences by discussing the publicness and public space literature before considering the marine licensing decision making process as it is defined within the literature.

The conceptual framework and methodology are then provided before the thesis presents its analysis and findings chapters. The presentation of these chapters commence from where the literature ends, namely the marine development decision-making process, and end with the analysis and findings relating directly to the publicness of the sea. The discussion chapter likewise commences with process before applying this to the publicness of the Goodwin Sands and wider marine space.

The full thesis structure is presented below:

Chapter 1 provides the introduction, research context and questions.

The literature review undertaken for this research is presented in two Chapters, and is limited to academic research papers and books unless otherwise specified.

Chapter 2 introduces and considers how the public space literature can be applied to the marine environment, and explores the extent to which this has been previously considered within the literature. This Chapter utilises and discusses Henri Lefebvre's Production of Space thesis to provide depth of understanding regarding how we use and value space, and how this is a useful framework for considering the multiple values which are present within debates pertaining to development at sea.

Chapter 3 explores literature in relation to RQ2 (How public are the marine development governance frameworks and decision-making processes). It locates MSP governance frameworks within wider governance theory and spatial planning literature, with discussion focusing on the publicness of these governance theories as operated within the English context. This Chapter also considers the marine development decision-making process as presented within the academic literature. But these decision-making processes are themselves subject to multiple, and often contradictory, knowledge claims and ethical positions. As such, this Chapter considers the legitimacy of knowledge claims in relation to expert and non-expert assessment of development

impacts and the role of evidence as well as stories and myths used to justify these assessments. This discussion leads to reflection of the ethics of decision-making.

Chapter 4 draws the two literature review chapers together into a conceptual framework which is used to frame the empirical work of this thesis. This is followed by introduction and justification of the research methodology. The methods used within the empirical research are discussed and the Goodwin Sands study introduced and justified.

The analysis and findings of this research are presented in four chapters, three of which relate to RQ2 (How public are the marine development governance frameworks and decision-making processes?). This presentation demonstrates the complexity of these frameworks and processes, and indeed, this in itself provides critique of their publicness.

Chapter 5 starts where the literature review discussion ended, and presents empirical research findings from the qualitative analysis of marine legislative and policy documents within which English marine licensing operates. This secondary source data analysis provides the legal and policy framework within which the main Goodwin Sands case study is situated. In addition, secondary source literature is used to contextualise the decision-making process through which case examples and the main case study marine licences have been determined.

Chapter 6 presents quantitative analysis of marine licensing data for applications consented under the legislative and policy regime set out in Chapter 5. Analysis of marine licence case examples across the breadth of development type licenced under this regime is also presented to produce a process map, which includes consideration of the stakeholders within the determination process. This Chapter provides the *process* context within which the main Goodwin Sands case study is located.

Chapter 7 presents findings from the Goodwin Sands aggregate extraction marine licence case study. This Chapter presents the findings of the publicly accessible marine licensing documentation to analyse how the publicness of this specific marine space has been considered within the marine licensing regime and how expert knowledge claims are validated to the detriment of ‘non-expert’ stakeholders. This Chapter provides evidence of the local, non-professional, expert knowledge and the legitimacy of these knowledge claims. The experience of the licensing process, from

opposing perspectives, is also explored here and the analysis of these experiences leads to findings related to the limitations of the marine licensing process in relation to the involvement of multiple, and contested, knowledge claims.

Chapter 8 presents findings from the Goodwin Sands as a marine public space case study. The Production of Space thesis spatial triad of social space to the Goodwin Sands is used to frame the analysis by situating the area not only physically, but also temporally and mentally/spiritually, and exploring its contemporary use and how its historic use and conceptualisation. Through considering the stories, myths and legends, in addition to the charts produced to support multiple receptor impact assessments and those used within marine planning more generally, a sense of the multitude of ideological mediations of space overlaying, and adding to the socially produced meaning of the Goodwin Sands is considered.

Chapter 9 draws together a discussion of the four analysis and findings Chapters with reference the literature review and allows the empirical research findings to be explored more holistically. A series of public space models are applied to the Goodwin Sands, based on the data presented within the case study analysis and findings Chapters.

Chapter 10 offers conclusions based on this discussion and re-examines the research questions to reflect on the extent to which they have been answered and consideration of alternative methods is discussed. Suggestions are made for ways to further the research presented in this thesis, and recommendations made regarding how marine licensing processes, and marine planning policy, could be amended taking into account the research findings.

The ordering of literature review and primary research chapters is illustrated in Figure 1.3, overleaf.

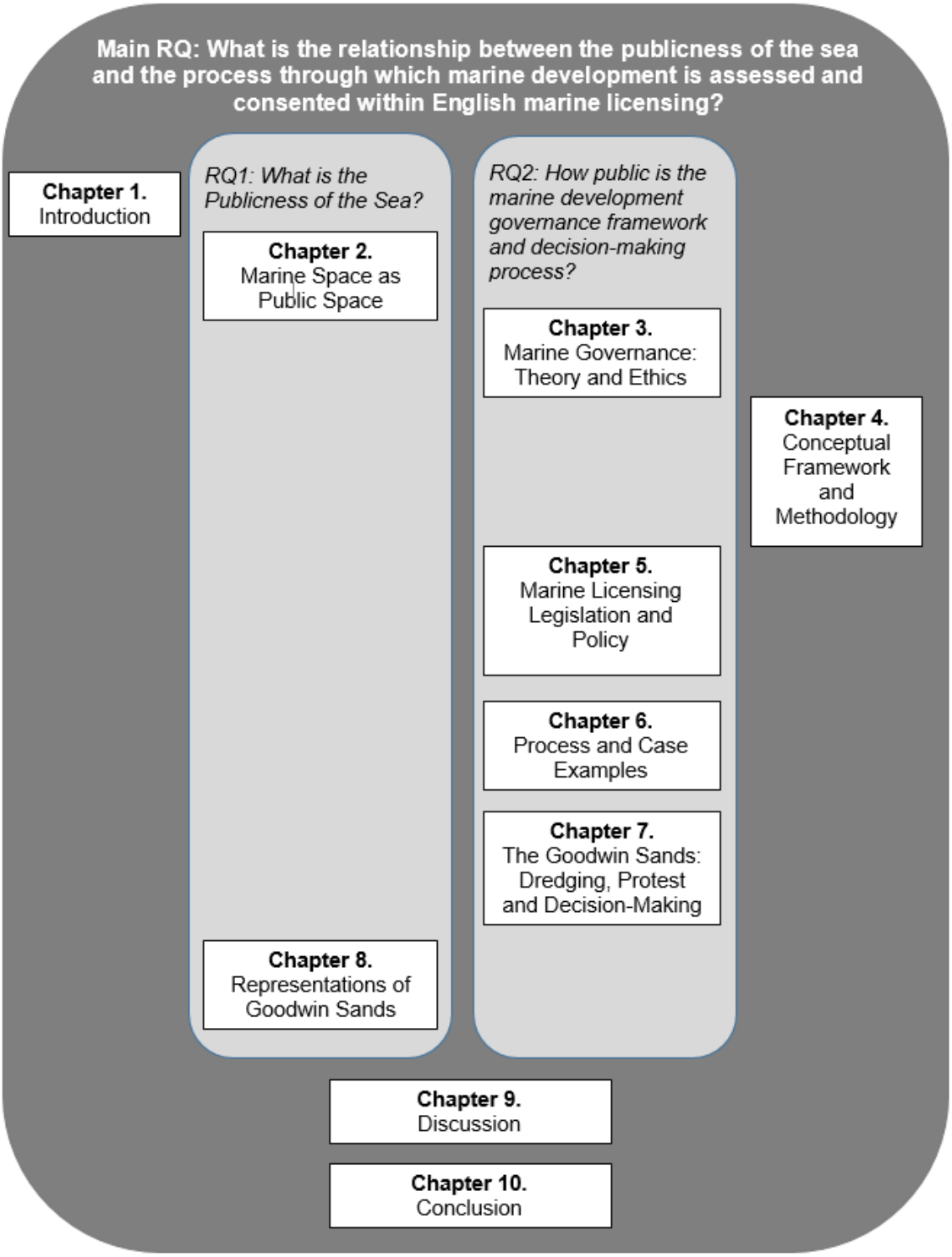

Figure 1.3 Thesis Structure

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Chapter 2. Marine Space as Public Space.

2.1. Introducing Socially Produced Marine Space

This Chapter explores marine space as socially produced public space. The term publicness, and related terms public goods, and public realm are then explored and contrasted to common and open-access goods. The urban public space literature is utilised to consider how definitions of public space provide valuable insight for MSP decision-making. The nature of marine space and relevant MSP literature which engages with marine space theoretical debates is discussed in order to situate the contribution which this current research makes within this field of study. Acknowledging the 'spatial turn' in social science (Schmid 2008, p2; Wilson 2011; Gieseking & Mangold 2014), this Chapter provides justification for the adoption of the Henri Lefebvre's (1991) Production of Space thesis for this research. The Production of Space thesis expresses a "dialectic of social and space and human action" (Fuchs 2019, p135; Merrifield 2000) in which social space is the definition of the meaning of space:

> "The form of social space is encounter, assembly, simultaneity. But what assembles, or what is assembled? The answer is: everything that there is *in space,* everything that is produced either by nature or by society, either through their co-operation or through their conflicts. Everything: living beings, things, objects, works, signs and symbols" (Lefebvre 1991, p101, emphasis in original)

Utilising the Production of Space thesis allows space to "serve as a more general boundary discourse that problematizes the complex divisions and interactions between nature and society" (Janzen 2002, p97). This provides a different lens with which to question "the role of natural processes in the production of space and thus about the contested character of the natural and social relations that constitute space-time" (Ibid). Lefebvre's Production of Space thesis provides "critique of technocratic spatial planning" (Wilson 2011, p374), which attempts to separate and schematise development impacts for assessment and mapping purposes. By exploring how, and why, the transformational processes of spatial planning operate as they do, Lefebvre assists in the "conceptualising [of] the ways in which this process of spatial transformation is represented and made possible" (Wilson 2011, p374).

The concept of the 'Production of Space' has "become common sense" for many within planning disciplines (Smith & Low 2006, p3), and is used within this research to construct a theoretical framework within which to consider the marine environment and how the space(s) within it are perceived, conceived and lived (Lefebvre 1991, p11; Merrifield 2000, Merrifield 2006; Schmid 2008). Further to this, it acts as a methodology from which to critique the current positivist based EIA and EBA processes through which marine licence applications are determined. This is crucial to this current research and finds support within the spatial theory literature:

> "Ecology… can provide only a partial analysis of nature and environmental issues: a politics based on it could never address the more inclusive problem of space and its production" (Janzen 2002, p102)

It must, however, be stressed from the outset that this critique is not intended to render EIA and EBA processes redundant. For Lefebvre the non-human world – 'nature', or 'natural space' – is understood to be a co-producer of space (Janzen 2002, p99). Nature is therefore a source of value judgements and meanings associated with space and as such is "a material condition of social space" (Janzen 2002, p102).

The Production of Space provides valuable insight into the multiple representations – conceptions of space – which operate through multiple publics and individuals within particular physical space. The concept of 'imaginaries' could be used in place of this (Crawford 2018; Davoudi 2018). However the significance of the Production of Space thesis is in the uncovering of the ideological mediations which are presented within representations of space (Lefebvre 1991, p40; Fuchs 2019).

2.2. The Production of Space

For Lefebvre, space is not a neutral concept. It is *more* than Euclidean, physical area. The space in which planning operates is socially constructed, imbued with meaning and actively produced through human activity (Bremner 2014, p19; Lefebvre 1991). Influenced by Marx, Hegel, and to a lesser extent Schopenhauer (Shields 2001, p228; Elden *et al* 2003; Elden 2004), Lefebvre's Production of Space is to be understood as a concrete universal concept and takes triadic form, in which subjects, objects and activities operate within three 'levels' of social space. The use of "three elements and not two" (Lefebvre 1991, p39) negates the relationships of "oppositions, contrasts or

antagonisms" (Ibid) which hold historical significance in philosophical dualisms such as subject and object or human and non-human. Of dualisms, Lefebvre polemically states that "this paradigm apparently has the magic power to turn obscurity into transparency and to move the 'object' out of the shadows into the light merely by articulating it" (Ibid). What is missing from these binaries is the *experience of the relationship* between the two terms. Using the body as an example Lefebvre explains that "the 'heart' as *lived* is strangely different from the heart as *thought* and *perceived* (Ibid, p40). Likewise, the human and non-human – or nature/culture – binary (explored in Chapter 3), appears absent of the experience which explains the dualism.

Lefebvre makes explicit the "dialectical relationship which exists within the triad of the perceived, the conceived and the lived" (Lefebvre 1991, p39). As illustrated in Figure 2.1 these levels, and the objects, subjects and activities within them, "particularize themselves with specific contents at different time period" (Dimendberg 1998, p29) to give meaning to social space.

Level	**Perceived Space**	**Conceived Space**	**Lived Experience**
Term	**Spatial Practices**	**Representations of Space**	**Representational Space**
Subjects	Members of society, family, working class	Experts, scientists, planners, architects, technocrats, social engineers	Inhabitants and users who passively experience space
Objects	Outside world, locations, spatial sets, transport routes, places that relate the local to the global, trivialised spaces of everyday life, desirable and undesirable spaces	Knowledge, signs, codes, images, theory, ideology, plans, power, maps, transportation and communication systems, abstract space (commodities, private property, commercial centres, money, banks, markets, spaces of labour)	Social life, art, culture, images, symbols, systems of non-verbal symbols and signs, images, memories
Activities	Perceiving, daily routines, reproduction of social relations, production	Conceiving, calculation, representation, construction	Living, everyday life and activities

Fuch 2019 p137; Lefebvre 1991

Figure 2.1 Lefebvre's Three Levels of Social Space

The interconnectedness of the three spatial moments of the perceived, conceived and lived, is crucial within the Production of Space, as Lefebvre explains:

> "The perceived-conceived-lived triad (in spatial terms: spatial practice, representations of space, representational space) loses all force if it is treated as an abstract 'model'. If it cannot grasp the concrete (as distinct from the 'immediate'), then its import is severely limited, amounting to no more than that of one ideological mediation among others" (Lefebvre 1991, p40)

This demand provides both a challenge and a possibility. The challenge for spatial understanding, for example in the case of determining a marine licence application, is how to schematise and quantify values and impacts within these spatial moments. The possibility is to use this triad, not as an abstract model to evaluate outcomes, but rather as a holistic approach to understanding the value of a space for the publics – members of society, experts, inhabitants and users as illustrated in Figure 2.1 – and through this understanding aim towards grasping the concrete nature of the space under review.

The Marxist influence on Lefebvre's Production of Space is relevant here too (Elden 2004, p6; Janzen 2002; Basta 2017; Fuchs 2019). Unlike post-modern, social constructivist or relational theories, Lefebvre maintains the notion of space as an *absolute*, a thing 'out there' in the world, independent of human experience of it. However, the absolute is not enough to give meaning and understanding to the way space operates within human experience and so the historical and abstract forms are necessary; the former to allow for context and meaning to be added, and the latter to allow for an understanding of how space is ordered and conceptualised within its representations, such as maps, charts and plans. There is, in addition, a need for humanism within Lefebvre's work and the necessary criticism towards more traditional Marxist structural theories which resort to "a functional reductionism that 'gives a privileged status to one concept'" (Fuch 2019, p133 quoting Lefebvre 1991 p106; Eldon *et al* 2003; Wilson 2011). As such Lefebvre departs from "orthodox Marxism's ontological prioritisation of materiality over representations" (Wilson 2011, p376; Merrifield 2000). This critique of the functional reductionism of structural theories can also be applied to EIA and decision-making processes which privilege physical impact over the intangible.

Where structuralist theories privilege the physical over the remaining spatial moments, social constructivist theories negate their interdependence and omit objectivity through

reducing space to a mere social construct. This finds no support in Lefebvre's formulation in which "space is socially constructed as the social is spatially constructed" (Dovey 2013, p267; Janzen 2002; Fuchs 2019). The juxtapositioning and parallel critiquing of both structuralist and social constructivist spatial theories leads to a set of maxims crucial for understanding the inextricable linkages between the spatial moments which give meaning to social space, as presented in Figure 2.2.

Space is not …	Space is…
… a philosophical concept	… not purely an abstract metaphysical concept
… assimilated to signification of meaning	… more than the representations humans use to give meaning to the absolute
… an empty container, a passive and inert holder for social relations, the built environment, cultural meanings, and political confrontations	… not a physical 'blank canvas' brought into existence through human action
… present, instrumental reason, and the visible effects of political hegemony	… more than a historical materialist term

Dimendberg 1998, p19

Figure 2.2 Maxims for Spatial Understanding

Considering the triad of spatial terms within the marine environment allows for a deeper understanding of its nature, in which the conceived space, imbued with "ideology, power and knowledge" (Merrifield 2006, p109; Lefebvre 1991) can be witnessed in the charting and delineation of ocean zones and boundaries. The perceived, absolute, spaces which "structure lived reality" (Ibid, p110), and in which spatial practices operate, therefore correspond to the physical objects of marine scientific study; the physical processes and structures which comprise the marine environment. But where are representational spaces found in MSP and marine licensing frameworks? Their absence appears lacking within the conflict scenarios of contested licence application determination. It is therefore the 'everyday experience' of lived marine space (Ibid, p109) which finds limited evidence within MSP and is challenging to reconcile within decision-making.

Critiques of decision-making which focus on the Lefebvrean representations that comprise conceived space are more easily understood, and therefore, theoretically, easier to reconcile. These form the “dominant space of any society” (Merrifield 2006, p109) and provide structure and arrangement to physical space through charting, describing and modelling. Materialism is important here and “the production of space is deeply embedded and centrally located in the overall political, economic and cultural conditions of a society” (Madanipour *et al* 2001, p4). Representations of space artificially separated from the remaining triad moments are *ideological* rather than *concrete* presentations (Lefebvre 1991, p40; Elden 2004; Wilson 2011). They present an abstraction of space from the perspective of the subject of conception in which “fragmentation and conceptual dislocation” are used to effect a distorted understanding (Merrifield 2000, p171). Maps and charts provide more detail than the points and vectors they display, and this is evident in the historical representations of marine space which to contemporary eyes seem at first, unfairly, naïve and amusing but with deeper thought are seen to have been delineated and choreographed in ways which reflect the views of the societies which created them:

> “During the sixteenth and seventeenth centuries, maps portrayed an ocean cluttered with ships, sea monsters, and rhumb lines, all of which were intended to portray the complex ‘reality’ of a space rich with natural and social features. By the early eighteenth century, however, the ocean was perceived as a space unworthy of social interest. Cartographers reduced the ocean to an empty, blue expanse, at most punctuated by placeless latitude and longitude coordinates and often – as in Lewis Carroll’s parody – as ‘a perfect and absolute blank’” (Steinberg 1999a, pp410)

Examples of the ‘cluttered’ sixteenth century and empty seventeenth century oceans are presented in Figures 2.3 and 2.4.

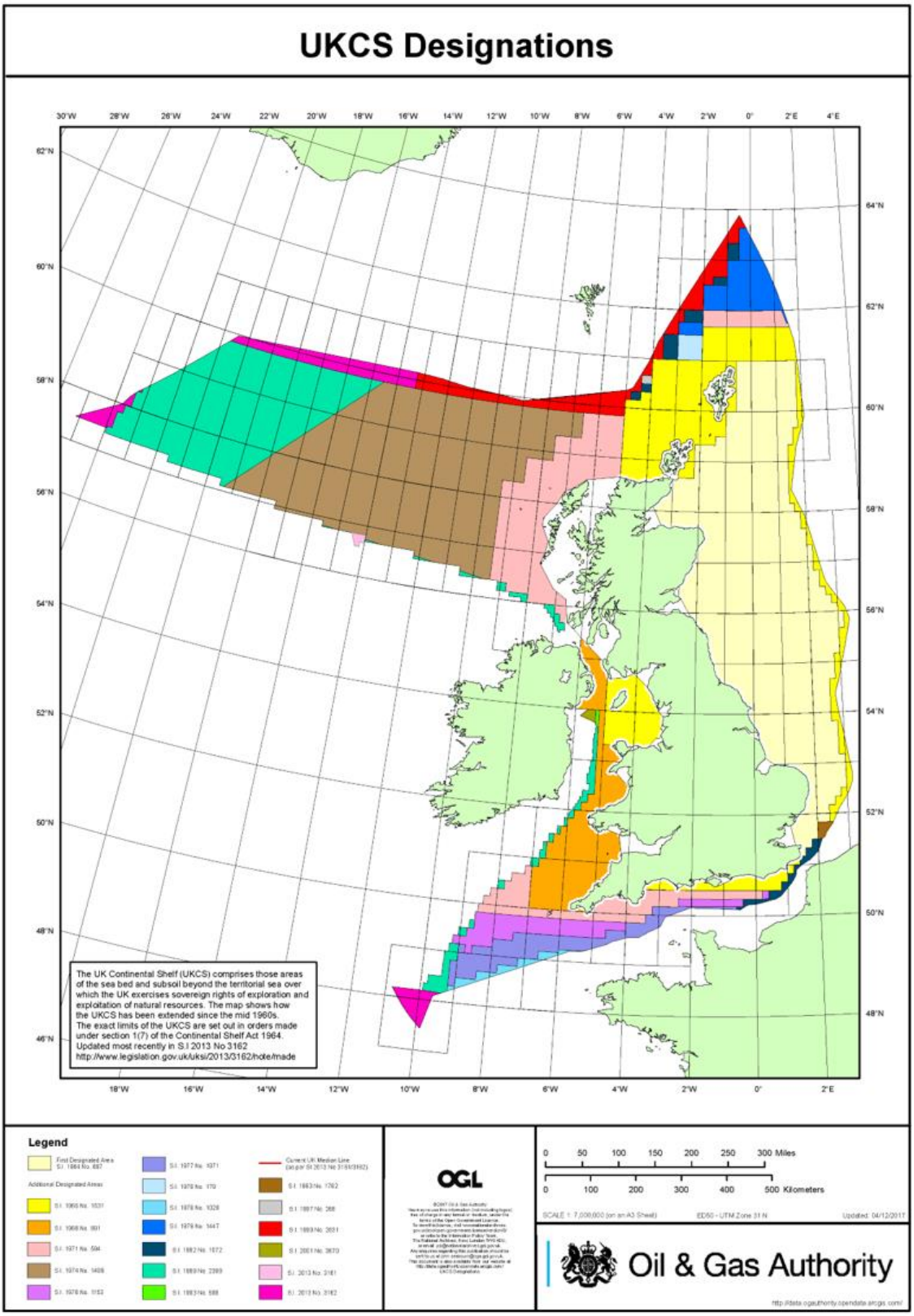
Atlasobscura 2016

Figure 2.3 Beware the Leviathan! Carta Marina 1539

Antique Maps Fair 2020

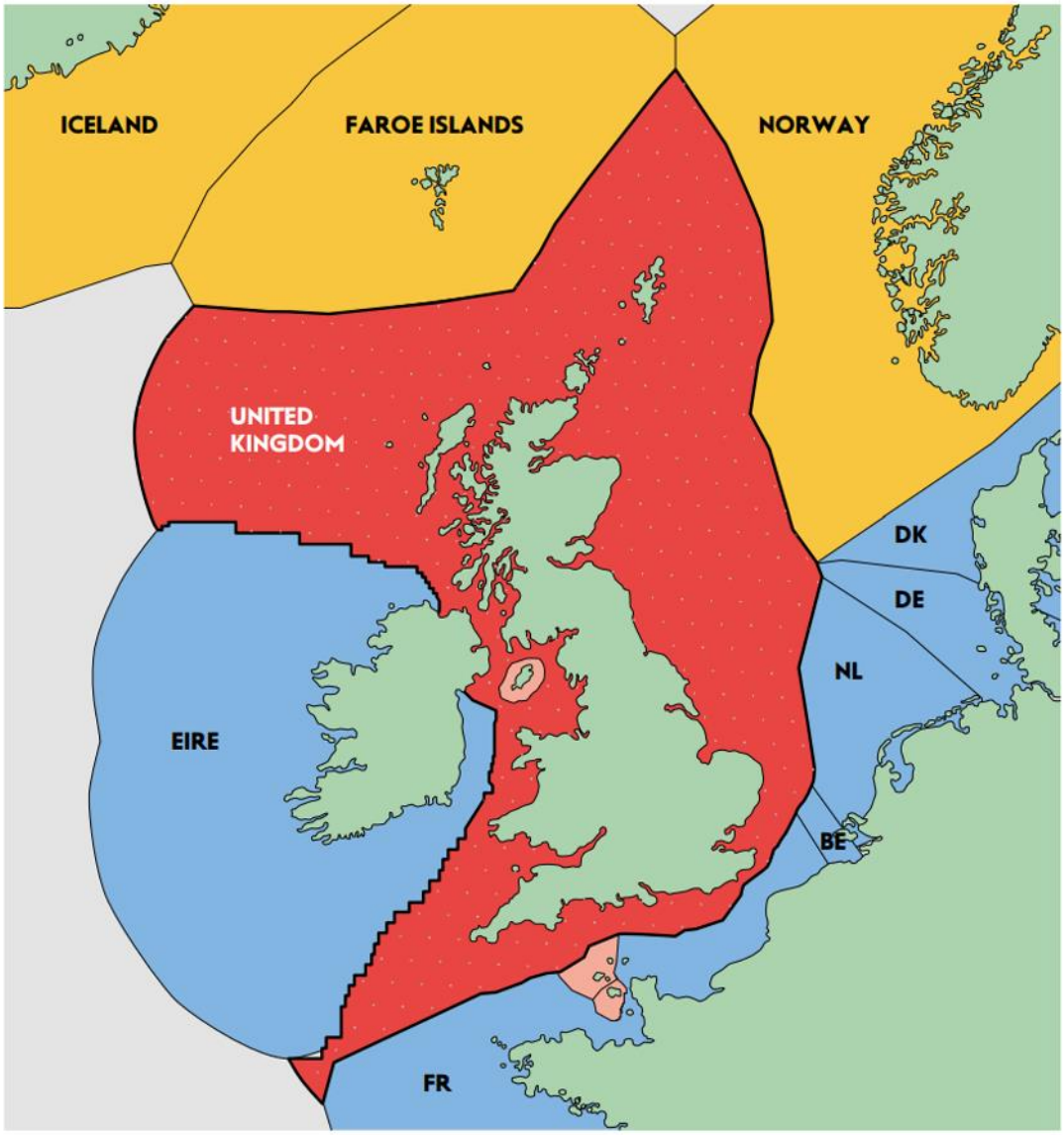
Figure 2.4 17th Century Nautical Chart

These charts provide examples of theoretical marine understanding being applied in concrete terms. As such they give physical expression to underlying marine ontologies. As representations of marine space they create meaning within marine social space. Contemporary charting of the expansion of UK Exclusive Economic Zone (EEZ) marine boundaries provide further example of this, as presented in Figures 2.5 and 2.6.



OGA 2018

Figure 2.5 The Socio-Cultural Historic Formation of the UK EEZ



Carpenter 2017, p11

Figure 2.2.6 UK EEZ in Relation to Other EU Member States[8]

The charts presented in Figures 2.5 and 2.6 represent the same physical space, and indeed the socio-political delineation of the EEZ boundary. But they mediate space in ideologically different ways which become evident when considering the source of these images. Figure 2.5 appears at first glance considerably more detailed than

[8] Note here the report author's consideration that scale and legend are unnecessary for this conceptualisation of UK marine space.

Figure 2.6 but both contain layers of hidden power-relations, historical details and social constructions within their conceptualisations. The first chart represents the expansion of UK marine space through the political, economic and social desires to increase fishing, oil and gas and, latterly, offshore wind production enacted through a series of statutory instruments through which the 2017 marine boundary has been reached (OGA 2018). The second, simpler chart, originates from a Brexit preparedness study for UK fisheries and represents UK marine space in relation to other EU member states illustrating the other parties within post-Brexit fisheries management considerations (Carpenter 2017, p11). The socio-political background of the creation of this chart is only understood within the context of the report within which the representation is found. The simplification of mapping data is acknowledged within the literature "as the full spectrum of an area's characteristics cannot be represented on a map" (Smith & Brennan 2012, p212). The signification of this is in the notion that "how we as social beings use and perceive space cannot be divorced from the wider structuring networks of property relations, the forces of production and the government apparatus itself" (Madanipour *et al* 2001, p3; Steinberg 2001; Elden 2004).

To summarise the discussion so far, the perceived marine space which is the object of marine scientific study is *mediated* through the conceived space, which operates within MSP through the charting and ordering of charts and plans, and through the representations used to assess and communicate the impact of marine developments. But, still, lived marine space remains evasive. This reflection is not new, and finds legitimacy as an object of contemplation through the acknowledgement of the absence of lived experience within spatial planning practices:

> "The 'perceived space' of everyday social life and commonsensical perception blends popular action and outlook but is often ignored in the professional and theoretical 'conceived space' of cartographers, urban planners, or property speculators. Nonetheless, the person who is fully human also dwells in a 'lived space' of the imagination and of Moments which has been kept alive and accessible by the arts and literature" (Shields 2001, p230)

Lived space gives meaning to everyday experience. Whilst Lefebvre cautions against privileging any of the spatial moments within theoretical or practical thought, giving dominance to lived experience does provide some useful insight for this current enquiry. Seen as a social construct, lived space is a "product of interrelations", a "sphere of the possibility of the existence of multiplicity in the sense of

contemporaneous plurality" and "always under construction" (Massey 2005, p9). Lefebvre's demand for triadic thinking requires recourse to the pragmatic inclusion of materiality here. This position extinguishes the physicality of space and power of the 'stuff' which can be touched and which acts as a limiter for action. In a marine example, the tactile nature of the English beach experience is seen as significant to its value, with the interaction possible within this environment qualitatively different from the experience of other non-human – terrestrial – environments:

> "There are very few natural environments where children and even adults are allowed, indeed encouraged, to poke about, pick up, touch, shape and play with its physical material and the creatures that support it – crabs, shellfish and worms. Rules about picking flowers and breaking branches and fears for health and safety inhibit such activities in parks and other environments. On the beach, the traditional sand activities, touching the rounded sea-worn pebbles and collecting crabs, stones and shells remain important activities for visitors. This is a way in which the beach visit closely reconnects people with the natural world in a way that many other visits to natural environments do not" (Tunstall & Penning-Rowsell 1998, p329)[9]

This quotation illustrates both the physicality of space, and the lived experience of its encounter. Meaning associated with space is therefore formed through interaction with physical environments, but reconciling why some spaces are experienced more strongly than others is challenging. Consideration of the distinction between *space* and *place* is helpful here, and indeed this dualism does appear to demonstrate the 'magic power' in its clarification.

Within the space/place dualism, 'space' is "abstract and impersonal … philosophical and scientific" (Madanipour 2010, p6; Varna 2014) and therefore the perceived space of the social space triad. 'Place' has "meaning and value [and is] personal and political" (Ibid) and finds expression within lived space. Completing the triad, conceived space is the mediating space through which both are understood, although care is needed here to keep social space "organic and alive" (Merrifield 2006, p105) and maintain the

[9] Of course, the ethics of this encouragement to interfere with the marine environment is a matter of personal value judgement.

“relations between conceived – perceived – lived spaces [which] aren’t ever stable, nor should they be grasped artificially or linearly” (Ibid, p111).

The complexity and fluidity of the nature of social space is also seen within the German word ‘raum’, translated into English as ‘room’ but with particularly emphasis on how physical spatial measurement is not enough to describe the experience of spaciousness. This finds expression in question such as “Is there room for another crate of furniture in the warehouse? Is there room for another house on the estate? Does the college have room for more students?” (Tuan 1977, p51). In this way “ample space is not always experienced as spaciousness, and high density does not necessarily mean crowding” (Ibid). Everyday experience in lived space is needed to make sense of the spaciousness of a particular place. Similarly, distance “is a meaningless spatial concept apart from the idea of goal or place” (Ibid, p136). This has theoretical links to ideas concerned with the sociological rather than the abstract nature of space and is accredited to Georg Simmel (1858-1918) (Allen 2000, p54). Proximity is central to Simmel’s analysis which suggest that everyday life is “experienced largely through *changing relations of proximity and distance* and, more broadly, through *cultures of movement and mobility”* (Ibid, p55 emphasis in original). In other words, both spaciousness and proximity require social production or construction.

These linguistic spatial considerations are important and acknowledge that “we probably communicate far more through space than we do with formal language” (Lawson 2001, p2). How spatial measurements are communicated explains more about the social and cultural underpinnings than its mere physical characteristics and, indeed, the physical characteristics are often meaningless without acknowledgement of the social spatial expressions. However, caution is needed in the application of spatial notion to avoid an “ethnocentric perspective that Western notions of space are universal” (Low 2017, p120). A tangential point here relates to the socialisation of the natural world which is evidenced within etymological spatial accounts in which “speakers of languages that use gendered nouns, such as the feminine *la mer* (sea) in French and the masculine *el mar* (sea) in Spanish impart feminine and masculine properties to each, respectively” (Low 2017, p120). Here again the relationship between language and experience and expression of space is clearly seen (Ibid, p119; Lawson 2001).

Taking *place* as distinguished from *space* by its "intensity [which] connects sociality to spatiality in everyday life" (Dovey 2013, p258) allows for a critique of the traditional planning theory which conflates the two terms. When space and place are used interchangeably they are treated as "unproblematic, as part of an obvious reality, often as a surface on which things happen, a two-dimensional Euclidian 'mosaic' or 'jigsaw'" (Madanipour *et al* 2001, p7). However, space is multi-layered within the Production of Space approach and therefore "a static, single viewpoint is not enough to understand it" (Ibid, p8). This multi-layered space is seen even more strikingly within marine space in which its fluid nature adds additional complexity to its spatiality and fluidity is discussed in Section 4.5.1.

Spatial understanding is complicated by the need to include "careful excavation and reconstruction, necessitate both induction and deduction, journey between the concrete[10] and the abstract, between the local and the global, between self and society, between what's possible and what's impossible" (Merrifield 2000, p173). Places are imbued with meanings through their social production (Gieseking & Mangold 2014, p3; p286). To understand this the publics involved in production need identification, as challenging as this may be. This is considered below.

2.3. Publicness

As introduced in Chapter 1, this research uses the term 'publicness' to refer to the *abstract public sphere* in which *public interest* is located. Defining these terms is therefore of fundamental importance. Derived from the Latin *populous,* 'public' concerns people: "people in general" or "an organised body of people" (Ercan 2010, p22; Madanipour 2003, p8). As stated in Chapter 1, Section 1.2, 'Public interest' is defined as "common wellbeing, general welfare or benefit that is controlled and received by all members of society" (Ercan 2010, p24) and 'public realm' or 'public

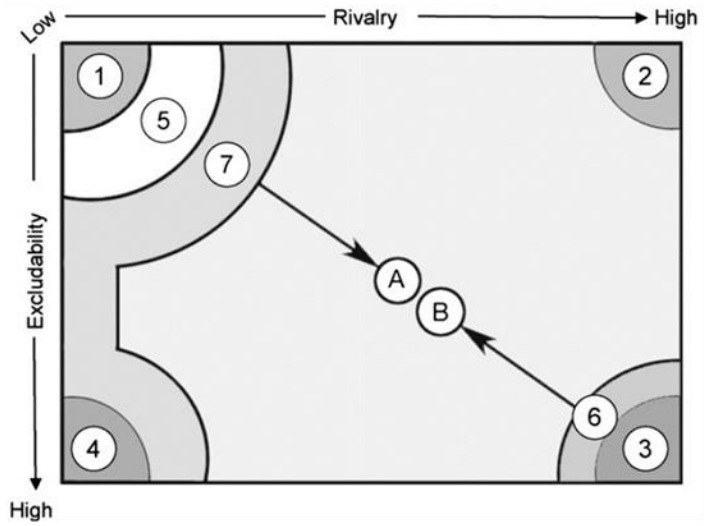
[10] The term 'concrete' is used as opposite of 'abstract' within the Production of Space thesis. Noted here is the apparent contradiction of the use of this term within marine space which, as discussed in Section 4.5 and particularly Section 4.5.1, can be considered as requiring a 'wet ontology' in order to account for its fluidity.

sphere' concerns "the entire range of places, people and activities that constitute the public dimension of human social life" (Madanipour 2003, p4).

2.3.1. Public Spheres and Public Goods

The public sphere is a "special, abstract kind of public space… not a physical location, but rather a conceptual space filled with ideas, opinions, and debates about issues of public interest" (Neal 2010, p4). Used conceptually, 'the public sphere' originates in the work of Habermas (1989) and is inherently normative (Iveson 2014(1998)). This origin sees the public sphere (or realm) within feudal society as "not as a sphere of interaction and debate but merely of representation" (Goode 2005, p4). In modern societies the public sphere "designates a discursive arena … where 'private persons' discuss matters of common concern" (Frazer 2018, 245). Within the public sphere "public debates form the basis for legitimising political decisions" (Naz 20118, p605). Normative claims within this conception demand that the public sphere be conceived as an abstract space in which "all manner of social formations *should* find access to the structures of power within a society" (Michell 2003, p131 emphasis added; Mitchell 2014). Notions of justice and fairness are therefore highly relevant to publicness research and these are discussed below.

Contrasting the public and private spheres provides for greater clarity, with the tangible private sphere is generally easier to define as '"mind, body, property or home" (Madanipour 2003, p113; Gieseking & Mangold 2014, p183). Considering types of goods and services in relation to their rivalry and excludability provides an entry point for considering the public sphere and a foundation from which to explore public space. These are illustrated in Figure 2.7.



Label	Type of Good	Characteristics
1	Public Good	Simultaneously non-exclusive and non-rivalrous
2	Common pool good	Non-exclusive but rivalrous
3	Private Good	Rivalrous and excludable in consumption
4	Club Good	Non-rivalrous in consumption but mechanisms exist to exclude consumers
5	Merit Good	Low on both rivalry and excludability but with clear focus on positive externalities
6	Orphan Drug scenario	Response to mark under-provision
7	Information Good	Non-rivalrous but variable in excludability
A	Value-adding investment in a good with its associated increase in the rights of ownership	
B	Government investment may reduce the full private good rights because of a worthy societal benefit	

Harris & Miller 2011, p196

Figure 2.7 Types of Good and their Character

With reference to Figure 2.7, Ideal public goods are “simultaneously non-exclusive and non-rivalrous” (Harris & Miller 2011, p196). They are goods of common concern and also appropriately called “collective goods” (Brouseau *et al* 2012, p23). The use of a public good by one person or group makes no impingement on others’ use of the same good. For example, enjoying a sea view does not detract its value for the next

observer[11]. Considering the range of goods presented here is useful for discussions regarding the character of the marine environment ascribed to it by different stakeholders. Where a sea view can be defined easily as public, fishers may consider their stocks as common pool, and some beaches are held in private hands.

The important point here, however, is the *provision and management* of public goods. The management of marine space is "a social issue that raises social challenges" (Brouseau *et al* 2012, p24). With EBA, which is discussed in Chapter 3, in mind, it is useful to consider that "the words 'economy' and 'ecology' both have their roots in the Greek word *oikos,* meaning 'our common home'" (IWCO 1998, p97). Thus, the social and natural worlds continue to find deeply embedded roots and considering ecosystem services – with the critiqued economic benefits they provide – in terms of their publicness finds etymological foundation.

Absent from the modelling of goods based characteristics relating to the exclusivity and rivalry they display is direct consideration of ownership. The model displayed in Figure 2.8 introduces this and returns to a binary distinction between public and private which is primarily used throughout the remainder of this Chapter. The use of binary formulations for analytical purposes is noted here. In reality the public- or private-ness of a space falls along a spectrum with many shades of semi-public found along the way.

[11] Although, of course, one could argue that the view is spoilt by others being present at the viewpoint – this is reminiscent of the 'room' discussion above.

Category	Public	Private
Access	Free right of entry/access to space/good	Limited access to space/good or use of space/good
Benefit	Everyone has equal benefit from space/good	Individual benefit only
Rights and responsibilities	Public management of collective resources; public control	Commercial interests
Ownership	Owned by the state or (collectively) by the people; management paid for by taxes	Owned individually

Parkinson 2012, p684

Figure 2.8 Public/Private Facts and Values

Ownership status is a useful concept within the public/private distinction and has significant application for the research findings presented in this thesis regarding controversy over the proposed removal of aggregate from an area which local people feel should be held in public ownership. Considering ownership status leads to the consideration of rights and responsibilities with private goods and spaces defined as "necessarily exclusive" (Mitchell 2003, p19). In other words, property rights allow for the "possessor to exclude unwanted people from access" (Ibid). In contrast public property *should* possess no exclusivity, be open to all, and, further, be the responsibility to all. The challenge within public space theories is to define what is meant by a public good being non-exclusive. Again, private access and responsibility acts as a contrast in that access is controlled by the owner and maintenance is the owner's responsibility: For a private dwelling front door locks exclude unwanted intruders and owner takes on responsibility for the cleanliness and maintenance of this private space. But for public space access and responsibility are held in public concern. What does this mean in practice? Who can enter? Who should maintain the space?

The four categories of facts and values attributed to public space in Figure 2.8 helps to formulate a response to this. For the access and benefit categories, 'the public' is seen as universal (Parkinson 2012, p684). However, rights and responsibilities and ownership categories bring in the notion of the state (Ibid). The introduction of state responsibility, or statehood, adds important nuance to utopian statements of the non-exclusivity of public goods and in a very general sense begins to define 'the public' as

a group within a group rather than a universal. The concept of a *universal* public does seem to contradict with everyday notions of society and use of public goods and resources. Along with ownership considerations, management undertaken on behalf of a nation state requires reflection on social justice debates which work to expose the "principles [which] govern the basic structure of a society" (Miller 1999, p152). Considering the public as a society finds support in the literature as "at its core, the relationship between the public and the private goes to the heart of a key concern of social philosophy: the relationship between the individual and society" (Madanipour 2003, p67).

2.3.2. Justice as Publicness

Rights and responsibility questions regarding public goods lead to considerations of the notion of justice more generally. This is particularly relevant given that "planning as an activity is concerned with politics and, therefore, making choices over issues which are often highly contentious, whilst simultaneously striving to ensure that decisions are both fair and just" (McKay *et al* 2012, p148). Similar to ethical theories, several forms of justice are advocated within public space research in relation to access to the provision and maintenance of public goods as summarised in Figure 2.9.

Distributional justice	Rooted in economic theory and centred on socio-economic modes of fair distribution
Justice as recognition	Recognition of identity and difference between stakeholders seen as key for obtaining justice.
Procedural justice	Participation in management processes is key to achieving both fair distribution and recognition.

Sohlosberg 2003, pp79

Figure 2.9 Forms of Justice

Distributional justice theories state that the fair – but not quantifiably equal – allocation of goods and services, along with procedural concerns relating to their access, is central to promoting "a sense of citizenship, equality and social justice" (Low 2013, pp229). As a response to utilitarian conceptions of ethical fairness, distributional justice theories build on Rawls' (1971) attempt to "guard against injustice in that the greatest

good for the greatest number might, in its most extreme form, represent tyranny by the majority" (McKay *et al* 2012, p149). The Rawlsian free-rider problem is relevant here, in which public goods are "goods which are indivisible and which can therefore only be provided for everyone or no-one" (Miller 1999, p156; Arneson 1982; Harris & Miller 2011). In contrast to distributional justice, justice as recognition sees all stakeholders as important and their recognition within access to a public good is key for justice concerns. (Young 1990; Sohlosberg 2003).

Procedural justice – or justice as process – can be understood as a compromise position which consolidates ideas regarding the fair allocation of distributional justice with the importance of stakeholder recognition through its demands for "broader and more authentic public participation" (Sohlosberg 2003, p84). For decision-makers this results in the assertion that "anything less than [decision-making] processes underpinned by an appropriate degree of inclusivity in consultation disregards public moral values, thereby undermining the principles of democracy" (McKay *et al* 2012). This presents a deliberative theory which "emphasizes not the decision-making moment but *all the processes of opinion formation and public debating that go on before matters come to a vote*" (Parkinson 2012a, p28, emphasis added). For procedural justice decision-making processes are greatly improved "by including more diverse experiences and better quality information" (Ibid), with improvement meaning 'more just' decisions. As such, the 'right thing to do' – the *just* thing to do – is the result of "inclusive, democratic encounters, not something that pre-exists them, hiding under rocks waiting to be found by clever truth hunters" (Ibid). These theories relate directly to environmental ethics, which is discussed in Chapter 3. The extent to which a given process can be described as 'just' will depend on the ethical position of the evaluator.

Within environmental planning, justice considerations span both the human and non-human world and give additional depth to conceptions of publicness in relation to ownership of space and resources. Actor-network theory recognises non-humans within considerations of justice (Hillier 2001, p73; Smith & Brennan 2012). This ecocentric position thus expands justice concerns from *public* to *all beings* and further to *all receptors,* including non-humans, plants and habitats. It could be argued that

from this perspective the public are one of many interest groups – actors – within wider ecosystem networks[12].

Theories of justice provide commentary on the concept of 'the public' in relations to the rights and responsibilities which associate publics to public goods. The themes of access, benefit, rights, responsibilities and ownership are central to public space theories and therefore highly significant to this research. With 'the public' able to include all people, a subset of people based on membership of certain society or state, and further able to theoretically include both human and non-human participants, these themes recur throughout this thesis.

2.3.3. The Common Good or Open-Access Alternatives to Publicness

Before applying publicness to spaces, it is useful to consider common goods – or commons – and open-access resources as an alternatives to public goods. The former is defined as "neither public nor private space [with implied] open access and shared participation without the shadow of the state" (Blackmar 2006, p49). Common goods can be *either* rivalrous but non-exclusive – in the case of natural resources and other physical 'stuff' – *or* non-rivalrous and non-exclusive – in the case of theories and languages as common resources (Lessig 2002, p21; Klosterman 1985, p7). The distinction between common goods and public goods concerns their ownership. Where public goods are owned and/or managed by the state – on behalf of the public – common goods are held collectively by a distinct group, with management decisions made collectively. As common goods are held in "joint possession" (Nemeth 2012, p815). Members of the collective have access to the resource for which permission is not required. This access status risks Garrett Hardin's (1968) famous 'tragedy of the commons' in which natural resources held in joint possession are exhausted due to lack of overall allocation management (Lessig 2002, p22; Blackmar 2006). The challenge for maintaining common status for goods and resources is therefore to avoid such tragedy, with the suggestion that "where there is a benefit from leaving a resource free, we should see whether there is a way to avoid overconsumption, or inadequate

[12] This perspective is a useful critique for more anthropocentric publicness theories, and for current purposes only a summary is necessary.

incentives, without its falling under either state or private (market) control" (Lessig 2002, p22).

Open-access resources are generally understood as analogous with commons. There is, however, a subtle and important difference between them in that a common resource is defined as "owned and controlled collectively, and distinguish it from that which is not owned and controlled by anyone (open access)" (Mansfield 2004, p318). In countryside management, land is categorised as open-access with the associated "right to roam" given to uses of the space. Open-access in this context is rather specific. Within national parks and the majority of accessible countryside the land has a legal owner (HM Government 2017; North Yorkshire Moors 2017). However, a more conceptually accurate definition of open access is the "unappropriated resources that are beyond a prescribed political jurisdiction" (Blackmar 2006, p51). In marine terms, this is said to apply to "fish outside of territorial waters" (Ibid).

Whilst these terms add nuance to space designation, their application to marine space is limited within this research. Instead, the term 'public space' is applied.

2.4. Public space

> "The public spaces created by societies serve as a mirror of their public and private values as can be seen in the Greek agora, the Roman forum, the New England common, and the contemporary plaza" (Carr *et al* 1992, p22).

Following the examples in the above quotation, public spaces within urban centres show commitment to a public good and exist 'for the people'. In addition to built-environment examples, Victorian parks, developed to give people the opportunity to access open spaces for socialisation and recreation, are "symbolic of a wider commitment to the public good" (Worpole 2007, p11). Departing from these virtuous origins, public spaces in the 1990s and 2000s appeared to focus on 'spaces of spectacle' and the consumption of goods motivated by the desire to "attract investors and visitors alike and help economically regenerate the former industrial cities" (Varna 2014, p17).

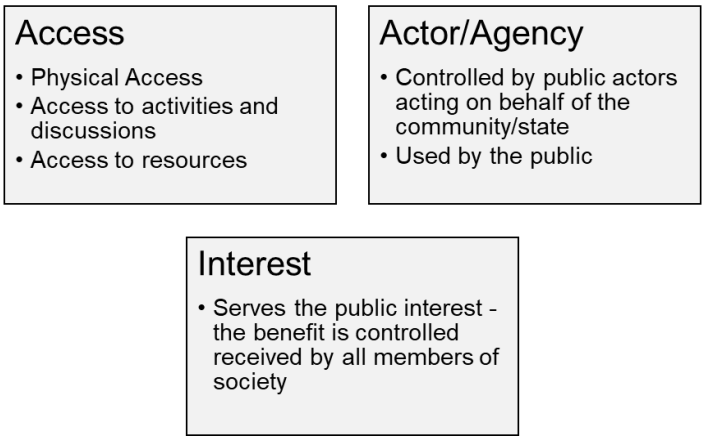
This section focuses on the public spaces / public realm relationship rather than the physical spaces itself. Attempting to understand their publicness through their

physicality alone is futile because “the sheer physical presence of roads, schools, and houses does not render them meaningful” (Madanipour 2003, p164). It is instead necessary to consider the uses of public space which are various and multiple:

> “Citizens themselves use public space for an enormous range of purposes—places to stop for a sandwich, to play, to walk the dog, to get from A to B, to people-watch, to read a book, to skateboard, to feed the ducks, to reconnect with nature, to reconnect with memories via memorials, to feel part of a collective enterprise, to demonstrate, to display, to meet, to sleep ... the list could go on” (Parkinson 2012, p682)

More thematically, public space usage can be accredited to five motivations, namely “comfort, relaxation, passive engagement with the environment, active engagement with the environment, and discovery” (Carr *et al* 1992, p91).

The term ‘public space’ has been conceptualised in a number of nuanced ways within the urban planning literature. A summary of selected public space definitions is included in Appendix 2 with emphasis added to suggest their relevance to marine space. Care is needed here regarding the motivations for defining a space as public. Privileging definitions which use instrumental language to characterise a space as public risk “seeing it as an asset in exchange, using it as a resource [or] treating it as a commodity” (Madanipour 2003, p112). Common themes running through all public space definitions include the importance of access, agency and interest. These are summarised in Figure 2.10 and expanded below.



Akkar 2005, p98; Madanipour 2003

Figure 2.10 Access, Actor and Interest Criteria for Public Space

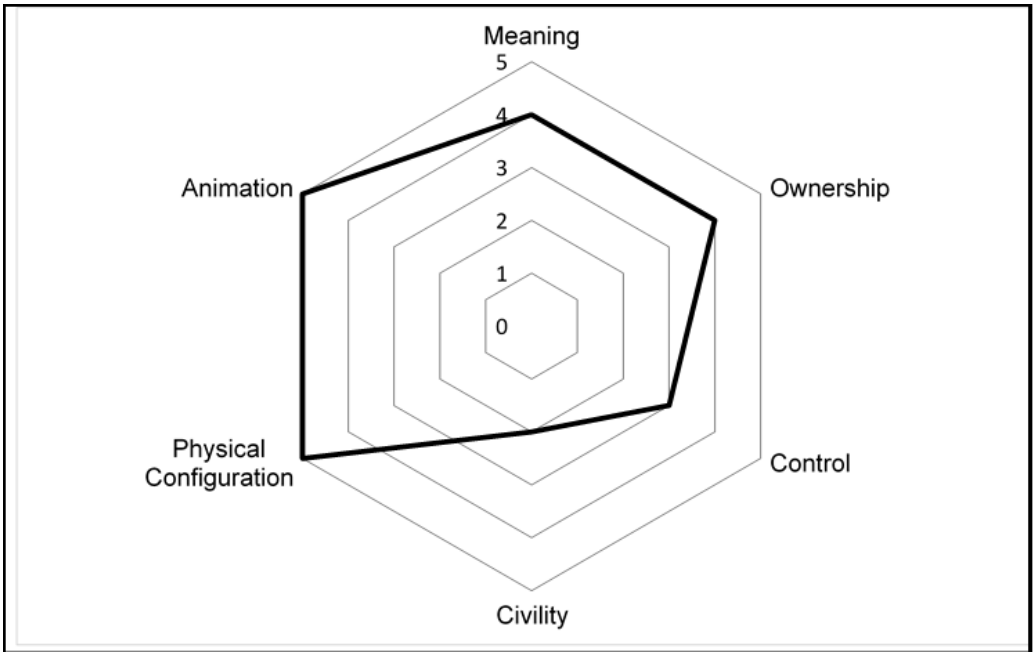
The ‘free access’ requirement for public space states that such spaces are “legally open and accessible to all without permission of anyone else” (Nemeth 2012, p813, Madanipour 2003; Low & Smith 2006; Madanipour 2010). The legality clause is important here, and requires only that public space are “open and accessible to all members of the public in a society, *in principle though not necessarily in practice*” (Neal 2010, p1 emphasis added). This is particularly pertinent to the marine environment where physical access is limited by equipment and vessel requirements while remaining legally accessible to all.

Ownership of public spaces is considered analogously to that of public goods, where publicness implies that they are owned and/or managed by public agencies on behalf of a particular public (Akkar 2005, p97). Likewise, spaces managed ‘in the public interest’ are also considered to be public. For some, a space must be publicly owned to be considered truly public, with such spaces seen as “the public sector expressed in physical terms” (Paddison 2013, p313; Carr *et al* 1992). However, this position is rather idealistic and benefits from further reflection on the public/private distinction previously discussed. Taking private space as “an individuated portion of social space that individuals enclose to control for their exclusive use” (Madanipour 2003, p68), and considering public as the antithesis of private, implies that space can be considered public, regardless of its ownership status, provided that access to it is not exclusive to an individual or group.

The relationship between ownership and agency is important here. Whilst free access is maintained within public spaces, “a person is not allowed to do just whatever he likes” (Waldron 1991, p311). Overarching legal frameworks prohibit certain types of behaviour and so do rules governing “the extent to which one person’s use of these places may interfere with another’s” (Ibid). Controls on antisocial behaviour within public spaces, such as parks, may necessitate night-time closures without impacting on their publicness. Prohibitive governance of public spaces can risk treating public spaces in purely instrumental terms by privileging behaviours that increase commerce (Ibid). Where behaviour is not expressly governed within a given public space, spatial uses by different groups can restrict the freedom of others to enter or utilise the space (Carr *et al* 1992, p158). This restriction of use by the actions of one group in relation to another is applied to this thesis through the legislative requirement for marine

licensing decisions to afford protection to legitimate uses of the sea (HM Government 2009a; 2009b).

It is evident from this discussion that public spaces can display differing degrees of ‘publicness’ and a single comprehensive list of characteristics cannot be provided. Public space models aim to work with the imperfections of physical public spaces rather than discounting them as public based on absence in a single criteria. These models allow for a pragmatic approach to consideration of public spaces and can be utilised as decision-making tools within planning regulatory frameworks. The ‘star model’ presented in Figure 2.11, overleaf, provides such a framework and “shows exactly where publicness is compromised and points out in a straightforward manner to the consequences of the decisions made in the development process” (Varna 2014, p9; Varna & Tiesdell 2010).



Less Public (1) → More Public (5)		
Few social groups regard the place as a public space	MEANING	Many social groups regard this place as a public space (i.e. more public for more publics)
Privately owned space with private function and private use	OWNERSHIP	Publicly-owned space with public function and public use
Overt and oppressive control presence – human and electronic surveillance; highly visible security presence	CONTROL	Free use
Over- or under-managed	CIVILITY	Cared-for; well-kempt; managed in the public interest; management balancing needs of different social groups
Poorly connected/located within the movement system (off-the-beaten track); poor visual connection with external public realm; with explicit entrances and thresholds	PHYSICAL CONFIGURATION	Well connected and located within the movement system (on-the-beaten track); strong visual connection to external public realm beyond space; without obvious entrances and thresholds
Dead public space: narrow range of supports for a limited range of potential uses and activities	ANIMATION	Wide range of supports for a wide range of potential uses and activities

Varna & Tiesdell 2010, p581; Varna 2014[13]

Figure 2.11 The Public Space 'Star Model'

[13] In the 2014 presentation of the star model the 'meaning' category has been removed (Varna 2014). This thesis reintroduces it due to its utility within considering the case study area of the Goodwin Sands as a public space.

The meta-dimensions of meaning, ownership, control, civility, physical configuration and animation are plotted on a radar chart to give clear visual presentation to the publicness of a space in which areas where publicness is diminished are immediately visible (Varna & Tiesdell 2010, p581). This model can be applied to any public space in an attempt to quantify its publicness and the authors acknowledge that the amendments to the key dimensions utilised may need amending when considering types of space (Varna & Tiesdell 2010, p593). As a "useful tool for grounding future empirical work" (Ibid), this model will, as intended by its authors, be utilised in consideration of marine public space within this thesis, culminating in the discussion presented in Chapter 9.

As this Chapter has made clear public space is more than physical space, and adopting an instrumental view does not capture the array of meanings given to a space. Whilst the star model allows for an inductive approach to understand "what is out there" (Nemeth 2012, p813), a deductive approach is also useful to "investigate the socially constructed meanings of public space, acknowledging that publicness is in the eye of the beholder" (Ibid, p814; Varna & Tiesdell 2010, p578). This investigation necessitates a return to the Production of Space thesis and the utilisation of Lefebvre's triad of spatial moments in order to deduce these meanings. In later versions of the star model the 'meaning' dimension has been removed (Varna 2014). There is a certain pragmatism to its removal which appears based on the desire for a 'straightforward' decision-making tool however perhaps this pragmatism has removed attempts to gain insight into the lived experience of a space and remove an element of social space meaning.

The remainder of this Chapter considers marine public space and utilises the MSP literature to consider how the marine environment is conceptualised as a theoretical space within this discipline. Further to this the value of utilising these urban studies spatial theories within marine environment research is discussed. This is further developed within the conceptual framework and methodology presented in Chapter 4, once the MSP decision making process has been discussed in Chapter 3.

2.5. Marine Space

> "As long as we limit our attention to land areas and associate these together in terms of large land units, referring to the seas only as an afterthought, we inevitably etch deeper the impression given by our maps, that the seas are negative in human relations and hence form the great barrier between people (Hartshorne 1953: 386)" (Steinberg 2001, p10)

The marine environment is a "physically unique region" (Steinberg 1999, p367) and traditionally seen in binary opposition to land. Under this conceptualisation the "fluid/liquid nature of water is opposed to the solid/static nature of land" (Germond & Germond-Duret 2016, p124). But physical uniqueness does not preclude the need to bring marine space within the remit of spatial planning, and marine space is "a space that, like land, shapes and is shaped by social and physical processes" (Steinberg 2001, p10). As such, the marine environment "has been part of the material organisation of society throughout its history" (Bremner 2014, p2; see also Tuan 1977, p63 with reference to crowds at English seaside beaches in relation to the spaciousness discussion above).

The social production of marine space can be evidenced through the definitions of the sea held by coastal communities which privilege their relationship to it. This relationship makes explicit the "implicitly public nature of the ocean … through the construction of that relationship" (Craghan & DeFilippis 2000, p194; Kelly 2018). More generally "particular places matter to both individuals and communities in virtue of embodying their history and cultural values" (O'Neill *et al* 2008, p2), and for coastal communities these places include the marine environment which forms part of their locality. Coastal and near-shore marine space has historically been "depicted as a place of health, vitality, glamour and fun" (Mayfield 2009, p249). In contemporary formulations connection to marine space more widely appears to display "the innate attraction and emotional sustenance that humans… feel for nature" (Beatley 2014, pxiv). As the "emotional connection with the ocean and marine life" this 'biophilia' can be utilised within conceptualisation of marine space as part of "repairing our dysfunctional relationship with the oceans" (Ibid). Wellbeing is also increased through marine space engagement in that "human beings have long sought out the coast for solace, stillness and rehabilitation" (Kelly 2018, p3). This emotional and wellbeing connection is significant to the construction of marine cultural heritage and appears

present within many people regardless of proximity and physical relationship with the seas. Regardless of coastal proximity, “even if you never have a chance to see or touch the ocean, the ocean touches you with every breath you take, every drop of water you drink, every bite you consume” (Earle 2009, p11).

The nearshore marine environment provides limited, but valuable, public space case studies, and maintains the assertion of the uniqueness of marine space through illustrating that “the ocean is a significant cultural place in society and has its own political and legal traditions” (Craghan & DeFilippis 2000, p202). One such case study into the closure of New Jersey public beaches in high winds on public safety grounds demonstrates how “multiple publics construct [the publicness of marine space] through their use, and each has a different relationship with the sea” (Ibid, p194; Gray *el at* 2010). In this case, beach closures acting to prohibit specific behaviours – surfing – through a naïve desire to protect public safety failed to acknowledge that “the production and reproduction of public spaces and the public sphere must include the practices and cultures of maritime life” (Craghan & DeFilippis 2000, p200). Marine space has been notably absent from “the traditional public space literature [which] examines instances where some groups are excluded from public space and, therefore, the public, because they are perceived to pose a threat to public safety, for example, the homeless, teenagers, gays, and lesbians” (Ibid, p193).

Coastal access control is also evident in relation to British seaside resorts where limited access to marine space is provided by “diverting potential rural visitors into resorts which were better equipped to handle large numbers of holidaymakers” (Mayfield 2009, p248). Here the motivations behind the control are less clear: ecological motives to protect fragile marine nearshore environments or economic motives of increasing tourist spending through enhanced ‘offer’ within resorts as opposed to outside them.

Whilst these beach closures and restrictions directly impact accessibility to the ocean, the sea itself remained technically open (Craghan & DeFilippis 2000, p202). A wider consideration here concerns visual impact and the mental or spiritual connection between aesthetics and wellbeing. This has become increasingly acknowledged in relation to the “growing pressures being placed upon [coasts and seascapes] by new forms of development, notably aquaculture, offshore wind farms, tidal energy schemes and the development of coastal risk management defences” (Landscape Institute &

IEMA 2013, p16; Beatley 2014; Potts *et al* 2016). For specific marine spaces designated as Marine Protected Areas (MPAs), and understood as public assets, "understanding … social dimensions is essential for effective planning and management" (Stickland-Munro *et al* 2016, p15; Gray *et al* 2010; *Lawson* 2001). For areas which are not afforded designated status, this discussion of public space considers that the same understanding of social dimensions is required.

Public space considerations of ownership also find application within marine space. Where international waters remain outside of sovereign state jurisdiction, it is useful to consider the historically held perspective that "space is a resource that yields wealth and power when properly exploited" (Tuan 1977, p58). The English marine area extends from Mean High Water Springs – including the tidal extent of rivers – to the 200nm EEZ boundary, and political economic jurisdiction is limited to this extent. Under the terms of the United Nations Convention for the Law of the Sea (UNCLOS) countries have sought to exploit ever increasing areas of marine space for oil and gas extraction, and, more recently, offshore wind construction (Mansfield 2004, pp316; Bremner 2013). This process of jurisdictional extension to the marine space surrounding countries has "enclose[d] the global commons as state territory, creating a new form of property right" (Ibid, p317). It is within these territorial limits that marine licensing operates and as such the granting of permission for large scale marine development projects can be seen as examples which "further enclose the oceans through limited licences or other privatization schemes" (Ibid, p317).

The English marine area's ownership status is dual level, with The Crown Estate – or various Duchy's – owning the majority of the seabed from foreshore to the 12nm mark (Marsden 1991). Some beaches are privately owned. 'Sovereign rights' extend beyond 12nm up to the EEZ boundary. England's offshore aggregate and offshore windfarm licenced areas are managed by The Crown Estate who award seabed rights and attach levies to the every tonne of aggregate extracted and square kilometre of wind farm array area leased (The Crown Estate 2019). With reference to the public space star model, "a public space is the most public, from the point of view of ownership, when it is owned by a public body, democratically elected" (Varna 2014, p31). This puts the status of England's seabed into a complicated category in which it is managed and owned on behalf of 'the public' by the MMO and Crown Estate respectively, both of which hold no democratic accountability. Despite this, defining English marine space

as public appears more reasonable than attaching either the 'commons' or open-access forms of space to it, outlined in Section 4.3.3. Both common and open-access space require "shared participation without the shadow of the state" (Blackmar 2006, p49) and this is limited by marine licensing and other regulatory frameworks that operate to manage marine environmental resources.

Ownership of marine public space has an additional uniqueness compared to terrestrial public space, and that is the presence of water. What does it mean to enter marine space? Is it the *water* or the *area marked on sea charts* which is entered? For the purpose of this thesis it is the latter. Water and its fluidity – discussed in Section 4.5.1 below – are a defining feature of marine space, but when thinking conceptually physical uniqueness serves to challenge and refine public space theory rather than finding limited or no application. Likewise, urban public space literature finds application within rural and global public space theories albeit with noted rarity (Smith & Low 2006, p3). Existing public space models and definitions, with designed application to urban settings, give no account of the unique physical nature of the seas (Steinberg 1999, p369). There remains merit in utilising them, rather than maintaining a complete epistemic divide between terrestrial and marine space. The MSP literature provides attempts to address this this within more theoretical research, with a proposed 'manoeuvring towards a relational understanding' of the seas which take account of the "unusual material characteristics of the sea and the relative fragility of human occupation and use of the sea" (Jay 2012, p93). However the marine environment's uniqueness in relation to its fluidity leads to the assertion that:

> "For land-based societies, the sea tends to present a vast, heaving mass, with an inherent mobility, power and dynamism that far exceed our capacity to regulate and control; in comparison to the majority of our life on land, our experience of the seas is one of belittlement and subjugation and of being trust into a complex of often precarious interactions" (Jay 2012, p93).

2.5.1. Fluidity

Acknowledging that the fluidity of marine space challenges the application of urban public space theories provides an opportunity to explore the universalizability of public space theory, and also consider whether the addition of water really does make marine space a *conceptually distinct* space. These considerations are deeply intertwined, and caution is needed here to avoid the '*overtheorization*' of marine space – mainly

associated with poststructuralist critical theory – which views the ocean as "an ideal medium for rethinking modernist notions of identity and subjectivity and the ways in which these are reproduced through land-centred divisions and representations of space" (Steinberg 2013, p158). Deleuze and Guattari's conceptualisation of the ocean as a "smooth space *par excellence"* is an example of this (Ibid quoting Deleuze & Guattari 1988, p479). This thesis does not seek to use – or *exploit* – marine space in this way. Likewise, for geopolitical studies within Anthropocene narratives – discussed in Chapter 3 – "water is an especially appropriate and important place to begin for a number of reasons. As a global resource, it is unique in that it is essential for both human life and ecosystem function, and non-substitutable for both" (Clarker-Sather *et al* 2017, p333).

The avoidance of such overtheorization of marine space is important and so too is it's *undertheorizing,* in which it is "reduced in the scholarly literature to a surface, a space of connection that merely unifies the societies on its borders" (Steinberg 2013, p157). Instead marine space is a "fluid space where many transnational systems, practices and imaginaries intersect and overlap" (Bremner 2013, p18). In cultural studies the fluidity of marine space "is used to signal a world of mobilities, betweeness, instabilities, and becomings" (Steinberg 2013, p156). Whilst marine social space is necessarily produced – within the Lefebvrean production of space thesis – there is an acknowledgement needed of this unique physicality in which "human encounters with the sea are, of necessity, distanced and partial" Ibid). The "complex, four-dimensional materiality" within a "uniquely fluid and dynamic space" thus require, for some, the development of a new ontology and epistemology "that views the ocean as continually being reconstituted by a variety of elements: the non-human and the human, the biological and the geophysical, the historic and the contemporary" (Ibid, pp156; Jay 2018). This requirement is fulfilled by adopting a *wet ontology* which is introduced "not merely to endorse the perspective of a world of flows, connections, liquidities, and becomings, but also to propose a means by which the sea's material and phenomenological distinctiveness can facilitate the reimagining and reenlivening of a world ever on the move" (Steinberg & Peters 2015, p248; Pugh 2016; Yates *et al* 2017; Jay 2018; Peters & Steinberg 2019).

A wet ontology acknowledges the "complexity of the ocean as a mobile space whose very essence is constituted by its fluidity and that thereby is central to the flows of

modern society" (Steinberg 2013, p160). Focusing on the fluidity of marine space – not limited to material fluidity – provides a new perspective, not just on the space *between* terrestrial space, but also on marine space "itself and how it is produced (and reproduces itself) within the dynamics of spatial assemblages" (Steinberg 2013, p163). This is supported by the relational turn within island studies and oceanic- and ship-geographies, and is evidenced in the assertion that "cultural and material practices tend not to be imbued with fixed or static meaning, but are instead understood as constituted relationally through the materialities of movements and complex assemblages" (Pugh 2016, p1042). Assemblages here include "island archipelagos,… moving aircraft carrier fleets or wind turbines formations, as these assemblages dynamically evolve and rework human and more-than-human relations over time" (Pugh 2016, p1042).

Adopting a wet ontology is useful within reflections on social marine space and publicness because it acknowledges the sea as "a space of *churning*, where… place is provisional and forever being (re)produced" (Steinberg & Peters 2015, p258, emphasis in original). Adopting a wet ontology is seen as an attempt to define the ontology of marine space as both universal and fluid (Ibid; Yates *et al* 2017; Jay 2018; Peters & Steinberg 2019). This does, however, rest on acceptance of the Production of Space thesis.

Critics of wet ontology utilise examples of political-ontological friction to evidence how and why ontological conflicts in marine space are important by "de-centering agency away from humans' to speak directly to the materiality and agency of water as a living being" (Yates *et al* 2017, p2). In other words, arguing against a socially produced ontology and instead applying a biocentric ethic which gives agency and intrinsic meaning to the materiality of water. By maintaining a multiplicity of ontologies for water this position questions "whether the water of scientists, engineers and government agencies reflects just one possible reality of water" (Yates *et al* 2017, p4). This position is valuable for questioning "the ontological assumptions that underpin dominant forms of water governance" (Ibid) and for acknowledging difference within marine stakeholder representations. However, focusing marine space theorisation primarily on its fluvial materiality renders cultural meanings secondary to physical processes. This confuses fluidity with liquidity and does not account for marine spaces non-conformity to hard boundaries:

> "The ocean is not simply liquid; it is not simply wet. It is solid (ice) and air (mist); it generates winds, which transport smells and tastes that permeate senses and imaginations, emoting the 'marine' and the 'maritime' miles inland" (Peters & Steinberg 2019, p294)

The 'fuzzy boundaries' of marine space require consideration of fluidity in more-than-liquid terms and this necessitates a "less territorially-fixed interpretation" (Jay 2018, 452). Applying the fluidity of wet ontologies to marine space, as a 'space-to-be-planned', conceptualises the sea as a 'soft space' exhibiting similar trends to the UK governance reforms and approaches to spatial development including devolution of power, participatory governance and "a broadly neoliberal agenda favouring entrepreneurial development" (Jay 2018, p451). As such marine space is a space which reaches "beyond conventional administrations and institutional boundaries" (Ibid).

Grasping marine space as a social space provides a conceptualisation – neither over- nor under-theorised – of the sea in which its fluidity is acknowledged as an intrinsic moment within its constant (re)production. It is important to recognise the uniquely fluid nature of marine space and, whilst its fluvial nature does add complexity to its spatial practice, it does not render it unknowable. Indeed, the churning and dynamism ever present within marine space from its 'spatial characteristics' (Lefebvre 1991, p33) and as such attempting to remove fluidity from discussion of marine social space is unfeasible and unhelpful.

2.6. Social Marine Space, Publicness and its Challenge for Decision-Making

This Chapter has provided the case, supported within academic literature, for conceptualising marine space as a public space in virtue of its social production, and its status as public in relation to the models originating from urban studies. Clearly, the latter requires adjustment in order to be directly applicable to the unique physicality of marine space and whilst this endeavour would be of interest to MSP scholars this current research instead presents findings which support the application of the production of space thesis within marine development regulation. The purpose here is therefore to provide an alternative or complementary method of assessing marine development impact which takes into consideration cultural impacts such as identity,

spirituality and culture. In a more practical application considering a marine space – such as a development application polygon – in relation to its perceived, conceived and lived spaces provides valuable insight into why conflicts arise within the licence application process. The lived experience of space and the mediated representations of it which are produced by its publics for multiple ideological reasons provide reasoning behind the ethical values displayed with public objections to development proposals. In particular, understanding that each representation of a given marine space provides only *one of an infinite array of perspectives* is vital in order to understand how development proposals can be misinterpreted and public objections can be dismissed as deviant.

Wet ontologies call for a consideration of the production of space which acknowledges the uniqueness of marine space in its fluidity. Forming understanding of the oceans as a conceptual space requires the use of oceanographic sciences and fluid epistemologies. Acknowledging physical uniqueness does not mean that attempts to apply terrestrial (urban) public space theory to the marine environment are destined to failure, but rather that the fluidity of marine perceived space adds additional complexity to marine social space. This implies an even greater need to engage stakeholders and consider multiple representations and lived experiences of marine space within regulatory decision-making. The more complex a space, the more input needed to understand its concrete nature.

This thesis considers marine space as a public space, socially produced through the triad of spatial moments. Reflecting on how public a marine development space is in relation to access, agency and interest and utilising more detailed modelling such as the star model therefore allows deliberation on how marine development regulation operates within this socially produced abstract space. Specifically this requires a conceptual framework which places EBA *within* socially produced space which has important consequences for how it operates and how it is perceived. This conceptual framework is presented and discussed in Chapter 4 along with the primary research methodology, case study introduction, methods and research ethics.

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Chapter 3. Marine Governance: Theory and Ethics

3.1. Introducting Marine Development Governance Frameworks and Decision-Making Processes

This chapter explores literature from within MSP, supplemented with wider environmental planning research, to provide context for the marine governance and decision-making frameworks used to manage UK seas. As such, this Chapter provides the context within which marine licensing operates, namely MSP and its antecedent environmental governance theories. Whilst there has been a tendency for MSP, as an academic discipline, to maintain epistemic distance between itself and terrestrial planning, stating the unique physicality and challenges of the marine environment as reason for this (Walsh & Kannen 2019; see also Ehler 2008; Kidd & Shaw 2013; Gazzola *et al* 2015), this Chapter explores how wider spatial planning and environmental governance theories provide valuable insights for the management of marine areas. This is supported by the contemporary literature in which the, now established MSP discipline, appears more willing to accept guidance from the lessons learnt throughout the development of its terrestrial counterpart (Boucquey *et al* 2016; Walsh & Kannen 2019).

Reflection on the antecedent theories on which the practice of marine licensing decision-making is based is particularly important for the young discipline of MSP, for two interrelated reasons namely that “theory allows planning practice to adapt to real world constraints with regard to scale, complexity and time… [and also] allows planners to translate concepts and knowledge in other fields into a usable practice” (Marcucci *et al* 2012, p403). That said, the risk of MSP being “interpreted as an overly-simplistic attempt to introduce the practices of spatial planning to the planning-resistant sea” (Jay 2018, p450) requires the careful consideration of how marine governance has developed within the current MSP paradigm, and its historical policy roots.

Developing this further, the chapter utilises academic literature from wider environmental ethics research, along with MSP and oceanography to explore the ethical and natural-scientific antecedents to these decision-making frameworks.

3.2. Situating Marine Licensing within its Governance Context

> "Through a Marine Act, we will introduce a new framework for the seas, based on marine spatial planning, that balances conservation, energy and resource needs. To obtain best value from different uses of our valuable marine resources, we must maintain and protect the ecosystems on which they depend." (The Labour Party 2005, p100)

MSP entered the UK policy landscape through the above manifesto pledge. It is under the enacted 'Marine Act', retitled 'The Marine and Coastal Access Act 2009' (MCAA2009), that marine licensing gained its regulatory remit.

Spatial planning, more generally conceived, "is part of a very complex web of institutions, issues and policy domains, and unlike welfare and social policy its object is not people but places" (Finlayson 2009, p18), and thus can be viewed as "a particularly interesting 'case study' in developing forms of governance" (Ibid). In other words, spatial planning, as a form of environmental policy, is "embedded in a system of *governance characteristic of the country in question*… filtered through and shaped by the particular problem agendas, political forces and institutional arrangements of a given country" (Hanf & Jansen 1998, p3, emphasis added), and as such the cultural identity of a given country will, to a greater or lesser extent, be visible within the planning system utilised. Thus decisions made within this wider context will demonstrate the strategic priorities and normative values of a given governance system (Haughton & Counsel 2004; Hillier 2010; Verma 2010; Kidd & Ellis 2012). If, therefore, decisions attracted mass protest or objection, then it is the governance framework, as well as the decision-making process itself, for which exploration is needed to improve stakeholder acceptance for future decisions.

To explore this 'complex web' within which marine licensing is situated it is necessary to consider the historical context of the ecosystem services management approach alluded to in the quotation at the start of this section. Limiting this contextualisation to environmental, rather than wider terrestrial (town and country, urban, etc.), planning avoids the challenge of navigating the maze of over a century of planning theory, and remains true to the paradigm which MSP is establishing of itself within academic research and applied policies.

Crucial to this is an understanding of the concept of 'ecosystem services' and the 'ecosystem-based approach' (EBA)[14]. For the purposes of this thesis, marine licensing is situated within wider governance theories as illustrated in Figure 3.1 below.

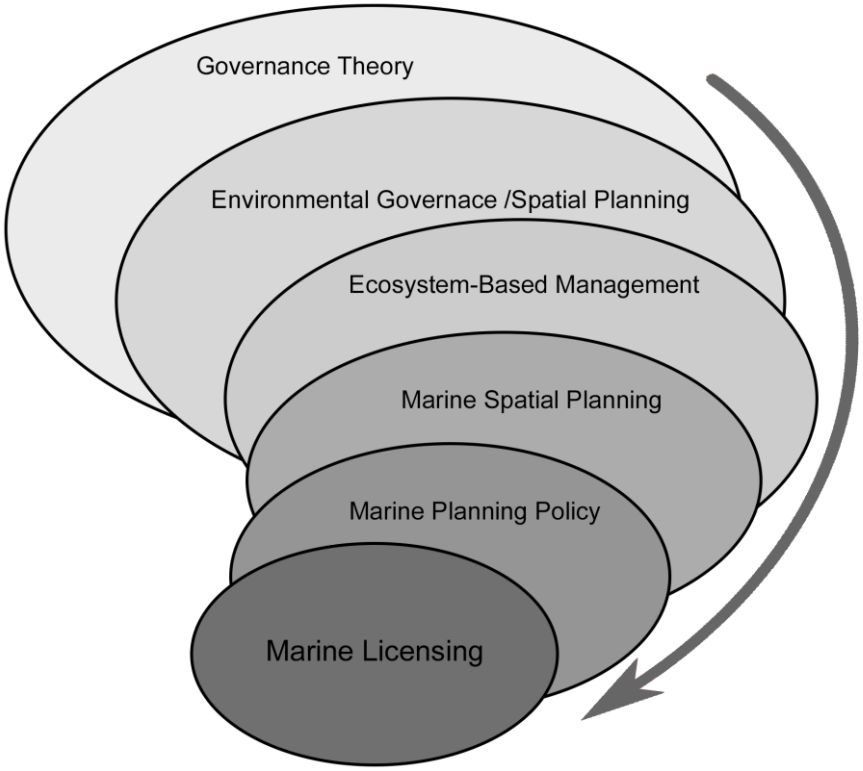


Figure 3.1 Situating Marine Licensing

3.3. Planning and the Environment: The Historical Context for Ecosystem-Based Approaches

With roots in the improvement of public health through higher standards of development, the link between environmental protection and improved human environments can be traced to the very heart of planning theory. The planning tradition itself is "typically presented as an improved set of practise for bringing people together to think about future spatial development patterns and agree on actions to bring them about" (Haughton *et al* 2010, p2, with reference to Healey 2004). Agreement regarding

[14] See Section 2.3 for a note on definition and justification for the use of this term in this research.

these actions has complex historical context and consideration of the environmental protection element of planning, for the purpose of this current thesis, benefits from considering how this became consensus for marine licensing decision-making frameworks in England. Revisiting over a century of planning theory falls outside of the remit of this thesis and, whilst interesting, would provide little focus for this research. Instead, the historical context for marine planning theory, within wider environmental planning theory, commences in the 1960's and 1970's when environmental matters were first explicitly considered within policy.

There were several key reasons for the increasing political, and indeed public, environmental concern during this time. As industrial capitalism continued to grow, threats to human health became increasingly visible (Speth & Hass 2006, p57). Rachel Carson's seminal *Silent Spring* (1962) and Ralph Nader's *Unsafe at Any Speed* (1965) drew attention to the environmental damage caused by corporate pollution with apocalyptic visions of the fate of humanity if nothing was done to stop anthropological impacts on the natural world (Ibid; see also Elliot 2004, p9)[15]. The witnessing of environmental disasters live on television for the first time during the 1970s also raised public awareness (Elliot 2004, p13).

This increased public awareness, gained through broadcast media, of the Earth as vulnerable and in need of protection finds its pivotal moment in the first images of the planet taken from space just a decade before. Jasanoff (2004) posits that "historians may eventually find that this vision had a greater impact on thought than did the Copernican revolution of the 16th century, which upset humans' self-image by revealing that the Earth is not the centre of the universe" (Jasanoff 2004, p36). The images from *Apollo 8* in 1968 changed perceptions of the Earth into a "small blue planet, floating in a seemingly endless void" (Speth & Hass 2006, p57). The significance of this cannot be overstated and for many "in a secular, multicultural age, the image of Earth is the nearest thing we have to an icon, a universal common property with shared meaning

[15] Carson ***et al's*** 1951 *The Sea is Around Us* provides an important marine example of these publications (Carson et al 1991)

and, for many, spiritual resonance" (Jasanoff 2004, p49).[16] The power and persuasiveness of this, quite literal, spatial imaginary of the 'blue planet' is also evidenced through the highly influential David Attenborough BBC documentary series of the same name (BBC 2001). The sequel series 'Blue Planet 2' (BBC 2017) was broadcast during the course of this research project and evidence of the major increase in awareness and policy initiatives towards the impact of marine plastics have been attributed to the visually powerful 'Our Blue Planet' episode (BBC 2017; Guardian 2019). Narratives here are an important tool in raising awareness, and this point, further developed in Section 3.8, emerges throughout this thesis as important for understanding public attitudes towards marine space.

As images in the 1960's of these new perspectives of the Earth were being broadcast more easily into the mainstream psyche, policy makers too were changing perspectives towards the human and non-human world. Described as "a watershed in the development of international environmental law" (Elliot 2004, p7) the 1972 Stockholm conference on the Human Environment provides evidence of the acceptance of this new view of the planet as something to be protected from further harm. (Ibid; see also Speth & Hass 2006; Jasanoff 2004). Over the following four decades, protection of the environment gained steady support and, with environmental protection and climate change mitigation firmly on the political agenda, planning in the UK became viewed as a "key mechanism in tackling climate change" (UK Strategy on Climate Change, DEFRA 2004 in Allmendinger 2011, p51).

However, environmental protection is not a simple story and the importance of socio-political context is crucial for both its meaning and its utility. Indeed "nature is perhaps the most complex word in the language" (Williams 1985, p155). It is "wrought with all manner of histories, geographies, meanings, fantasies, dreams and wish images" (Swyngedouw 2010, p299). Attempting to maintain the "socio-ecological balance" (Ibid, p307) through the implementation of measures "to make sure that things remain the same, that nothing really changes, that life (or at least our lives) can go on as before"[17]

[16] Increased public awareness of marine issues are evidenced through the popularisation of the seas through Disney films such as *Finding Nemo* and *Shark Tale* which extended mass cultural concerns related to non-human receptors into the sea (Jones 2014, p5).
[17] This is a western perspective of 'life going on as before'.

(Ibid, p309) appears as one ethical standpoint here and is discussed in Section 3.8. The link between the human and non- (or more-than-) human worlds is introduced in that "even scientific knowledge, built up over centuries as the one domain of human experience that is independent of personal and cultural biases, is now widely, if still controversially, acknowledged to be a social achievement" (Jasanoff 2004, p32). This observation becomes highly relevant to discussions of the assessment of environmental impact and data validity discussed throughout this thesis. This human/non-human binary is explored later in this chapter in relation to environmental ethical positions.

Spatial planning, and the ideology of sustainable development[18] brought forth under the New Labour[19] government (1997-2010), rests on the need to consider environmental, social and economic matters equally within decision-making (Haughton & Counsell 2004, p53) and the principal that land use should be regulated in consideration of the public interest[20] (Ehler 2008, p840). The turn to a collaborative mode of planning aimed to address these issues, with more emphasis on consultation and "interest groups, once the key threat to good political practice, … returned as 'stakeholders' and…, suddenly, seen as the solution to the problems" (Versteeg & Hajer 2010, p161). Furthermore, Labour's 'ecological modernisation' saw technology as another part of the solution to environmental protection and climate change mitigation, allowing lives to continue as before by utilising cleaner technology (Haughton & Counsell 2004, p55). Indeed ecological modernisation goes further by suggesting that "ecologically sound capitalism is not only possible, but worth working towards." (Gunningham 2012, p91). There is therefore a clear link between governmental rhetoric within a party-political system and the implementation of measures mandated through quantitative international targets and timetables (Speth

[18] Sustainable Development here defined, as conceived in The Brundtland Report, as development which "meets the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations 1987).
[19] The New Labour formulation included: Social progress which recognises the needs of everyone; Effective protection of the environment; Prudent use of natural resources; and Maintenance of high and stable levels of economic growth and employment (Haughton & Counsell 2004, p53)
[20] As seen in Chapter 2, the 'public interest' is a contested term.

& Hass 2006, p56) and designed to bring about a more sustainable use of natural resources and protect the global environment from further anthropogenic harm.

From the above it is clear that 'sustainable development' and 'collaborative planning' are key terms within this current research project. Sustainable development and ecosystem-based approaches, as discussed in the next section, aim to govern an environment in which humans are an integral part. In theory, at least, these approaches address developmental impacts to social or cultural receptors with the same priority as economic and environmental ones. Adding 'collaboration' as a tool to aid sustainable development goals implies that "governance is not just a question of designing techniques to aggregate preferences (so as to manage collective choices) and implementing incentives to harmonize individual behaviour … [but] also involves producing and sharing information to allow individuals to establish and modify their preferences" (Brouseau *et al* 2012, p26). Collaboration involves dealing with multiple stakeholders, multiple value judgements (discussed later in this chapter) and multiple 'publics' (discussed in Chapter 2). How this is undertaken in relation to marine licence determination thus forms a key part of this thesis.

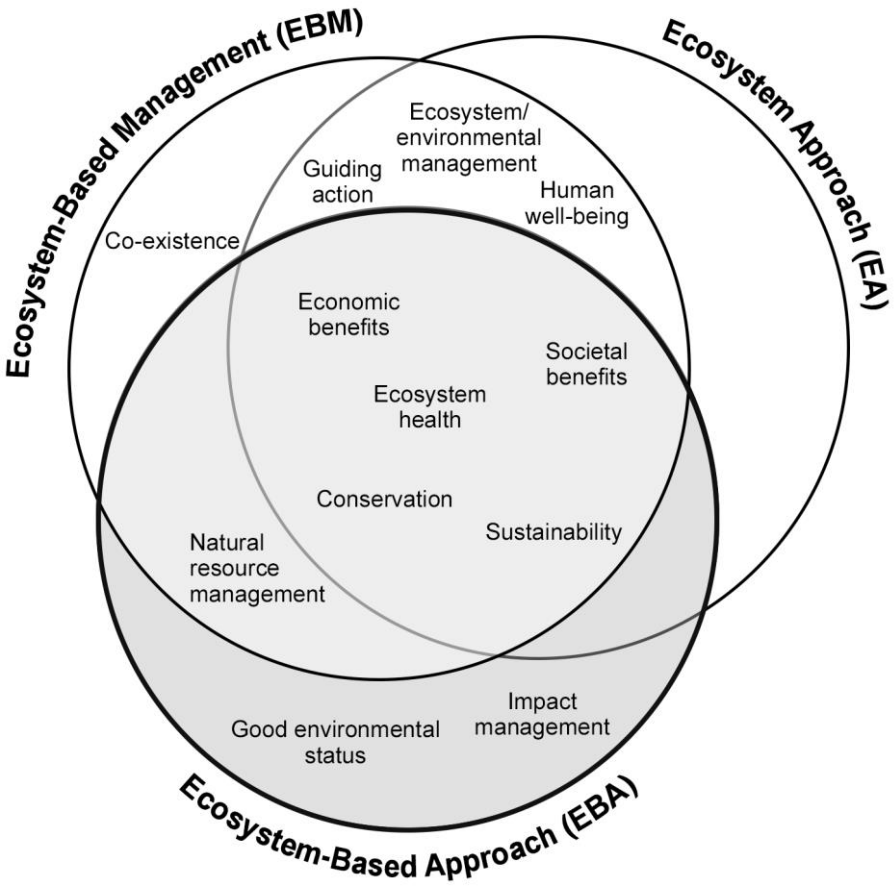
3.4. Ecosystems and the Ecosystem-Based Approach

> "An *ecosystem-based approach* to the management of human activities means an approach which ensures that the *collective pressure of human activities* is kept within the levels compatible with the *achievement of good environmental status*; that does not compromise the capacity of marine ecosystems to respond to *human-induced changes*; and that enables the *sustainable use of marine goods and services*" (HM Government 2011b, p4fn, emphasis added)

The above quotation, found in a footnote to the UK Marine Policy Statement 2011, highlights the foundation of marine management within a system that incorporates ecosystem sciences and theories into decision-making frameworks. In other words, "the language of environmental integrity is therefore at the heart of MSP discussion, policy-making and implementation" (Jay *et al* 2016, p129). Before exploring this system and its scientific basis, the terminology itself requires consideration, and the focus on this approach in this thesis above others, notably nature-based solutions, needs justification.

The ‘ecosystem-based approach’ (EBA) is the term used within UK marine policy for the management of the marine environment and so for consistency this is the concept used within this thesis. Usefully demonstrated by Kirkfeldt (2019), “several management concepts have been formulated” in response to the need to name approaches which manage marine ecosystems (Kirkfeldt 2019, p1; see also Arkema *et al* 2006). ‘Ecosystem-based management’ (EBM) (and the ‘ecosystem-based management approach (EBMA)), the ‘ecosystem approach’ (EA), and the ‘ecosystem based approach’ (EBA) all have slightly different conceptual lineages. Understanding the existence of these different concepts is important to note because “differences in legislative frameworks and national planning traditions could lead to different perceptions of e.g. principles and objectives of EBM, EBA and EA [and] these different perceptions could in turn influence the setting of objectives and thus the outcome of MSP” (Ibid, p2, see also Jay *et al* 2016).

Figure 3.2 provides the results from Kirkfeldt’s coding of ecosystem terminology in MSP literature and serves as a useful tool for the conceptual formulation of EBA used within this current thesis. The use of EBA in this thesis – in place of the ‘EBM’ used heavily with the European and international MSP academic literature – aligns with the ‘national planning traditions’ from which UK marine licensing has emerged. Noted here is the absence of the EBMA (Ecosystem Based Management Approach) formulation found in both literature and policy documentation.



Kirkfeldt 2019, p6

Figure 3.2 Objectives of EBM, EBA and EA

Approaches based on ecosystem thinking are "the 'given' around which other ideas and interests are organised" within MSP (Jay *et al* 2016, p130), however there exists a broad-church of ideas within this area. Both the "extent to which ecological understandings should shape human action at sea" and "the meaning and applicability of the [ecosystem approach]" are open to considerable and nuanced debate (Ibid). These debates are important, and positions found here are formed from multiple ethical perspectives on the human/non-human relationship. However, the details of each nuanced approach fall outside of the scope of this current thesis and the discussion of ecosystem services and EBA below finds mainstream path through the 'ocean of concepts' (Kirkfeldt 2019), whilst acknowledging that this presentation necessarily excludes all possible variations on the theme. This aligns with the view that MSP practitioners "focus directly on questions of operationalisation … rather than more theoretical questions about its conceptualisation" (Jay *et al* 2016, p131; Arkema *et al*

2006). The importance of ethical value judgements in the formulation of ecosystem management concept formulation is important here, and these are discussed later in this chapter.

Whilst EBA is the current paradigm within MSP literature, and the conceptual basis of the legislation and policy which governs marine licensing (Smyth 2017; Jones *et al* 2016; Shucksmith *et al* 2014; Collie *et al* 2013; Flannery & O Cinneide 2012; Douvere & Ehler 2009; Douvere 2008, Gilliland & Laffoley 2008), other approaches exist. In recent years 'nature-based solutions' has emerged "specifically to promote nature as a means for providing solutions to climate mitigation and adaptation challenges" (Nesshover *et al* 2017, p1216, see also Maes & Jacobs 2015; Eggermont *et al* 2015). This concept, along with others, such as 'ecological engineering', 'green/blue infrastructure' and 'natural capital', all relate, to a great or lesser extent, to EBA. (Nesshover *et al* 2017). These concepts are again formulated on specific ethical value judgements pertaining to the human/non-human world. From the perspective of value judgements, the nature-based solution formulation is interesting in its explicit recognition of 'natural' processes as being the 'solution' to anthropogenic problems by arguing that it goes "beyond the traditional biodiversity conservation and managements principles by 're-focusing' the debate on humans and specifically integrating societal factors such as human well-being and poverty alleviation, socio-economic development, and governance principles" (Eggermont *et al* 2015)[21].

3.4.1. Ecosystem Services

The range of ecosystem services obtained from the marine environment is illustrated in Figure 3.3. From this extensive list the importance of ocean health for human flourishing is clearly seen. Likewise, the extensive list of services that the marine environment provides for humans alludes to how seas have been utilised for anthropogenic development. A good example of this relates to food production, where "the oceans… are the planet's largest factory of organic matter" (Castro 2007, p377).

[21] For the purpose of this thesis it is deemed sufficient to exclude all by cursory mention of these related terms, and instead focus on the underlying ecosystem services and the management approaches on which marine licensing, as operating within the case study which forms much of the primary research, is based.

This example is one of many health and well-being services which humans gain from the oceans (Wheeler 2014 *et al*, p10).

Core Ecosystem Processes
Production
Decomposition
Nutrient cycling
Water cycling
Geological processes
Ecological processes
Evolution processes

Beneficial Ecosystem Processes
Biomass production: primary
Biomass production: secondary
Larval / Gamete supply
Biological control
Food web dynamics
Formation of species habitat
Species diversification
Genetic diversification
Waste assimilation
Erosion control
Formation of physical barriers
Formation of pleasant scenery
Climate regulation
Air quality regulation
Biogeochemical cycling
Water cycling (regulation)
Water purification (quality)

Benefits	
Food	Fisheries
	Aquaculture
	Fertiliser/Food
Raw Materials	Cooling water
	Marine aggregate
	Salt
	Ornamental materials (shells)
Energy	Biofuels
	Oil and Gas
	Renewable energy
Space and Waterways	Property
	Maritime transport
	Space for activities/structures
Psychological / Social wellbeing	Tourism
	Recreation / Sport
	Spiritual / cultural wellbeing
	Aesthetic benefits
	Nature watching
	Personal aquaria
Knowledge	Research
	Education
Regulatory services	Nature hazard protection
	Avoidance of contamination and pollution
	Carbon sequestration
	Nature hazard protection

Hull *et al* 2014, p360; see also Kaiser & Williams 2011)

Figure 3.3 Marine Ecosystem Services

Ecosystem services are “the conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfil human life” (Daily 1997, p3). As such ecosystems can be viewed as “life-support systems and essential for the survival and welfare of human beings” (Wang 2004, p42; see also Daily 1997; de Groot *et al* 2012, Clark *et al* 1988; National Research Council 2005). Ecosystem services were introduced into the international environmental policy domain through the Millennium Ecosystem Assessment (MEA) (UNEP 2006) as the “outputs of ecosystems from which people and society derive benefits” (Potts *et al* 2014, p139; Laurila-Pant *et al* 2015, p2; de Juan *et al* 2017, p39). There is a clear element of

subjectivity present in this formulation. Defining a benefit (or good) as “something of anthropocentric instrumental value, i.e. of both personal use (direct and indirect) and non-personal use (bequest, altruistic and existence)” (Potts *et al* 2014, p140) does little to lessen this subjectivity. Indeed the value of ecosystems services is contested, particularly with regards to cultural goods and services for which an economic or quantitative value is hard to quantify.

Marine ecosystem services “play a major role in the global geochemical cycling of all the elements that represent the basic building blocks of living organisms” (Daily 1997, p180) and “provide benefits to people through the provision of seafood and other resources worth trillions of dollars annually” (Borger *et al* 2014, p161). Coastal and marine ecosystems “play a critical role in supporting economic prosperity” (Rivero & Villasante 2016). Their value is such that “the economies of the Earth would grind to a halt without the services of ecological life-support systems, so in one sense their total value to the economy is infinite” (Costanza *et al* 1997, p253)[22]. Value here appears limited to economic value.

3.4.2. Ecosystem-Based Approach

> “[The Ecosystem-based Approach] represents a paradigm shift from other traditional management approaches which were focused on individual species, on a small spatial scale, lacked research, and were based on a short-term perspective” (Ansong *et al* 2017)

EBA departs from forms of environmental management which focused on “single species, sector, activity or concern” (Dominguez-Tejo *et al* 2016, p116). As such, “an ecosystem services approach can be used to ensure the assessment of the socio-economic impacts is holistic and all encompassing” (Dalton *et al* 2015, p866). EBA is area-based and considers the three pillars of sustainability; environmental, social and economic (Borger *et al* 2014, p162), and in theory, does not privilege any one of these over the others as they all form part of the characteristics of an ecosystem. Proposed advantages over traditional, single-issue focused, forms of environmental management are displayed in Figure 3.4, the benefit of which is seen a moving “beyond

[22] In 1997 Costanza *et al* valued global ecosystem services at US$33 trillion dollars, with approximately 63% of this value attributable to marine ecosystem survives (Costanza *et al* 1997, p259).

how people affect ecosystems to include how people depend on, benefit from and are affected by ecosystems" (Rivero & Villasante 2016; see also Marcucci *et al* 2012 for an engineering perspective on single-issue management approaches).

		Traditional Approach	Ecosystem Based Approach (EBA)	Benefits of EBA
Characteristic	**Management structure**	Isolationist	Horizontal/ inclusive	More holistic (addresses multiple problems)
	Management objectives	Single issue focused	Ecosystem focused	Reduces chance of cumulative effects and opposing objectives
	Overarching objective	Economic/ environmental trade-offs	Maintaining ecological integrity	More science-focused decisions
	Management boundaries	Constitutionally defined	Ecologically defined	Reduces overlap between multiple jurisdictions
	Management approach	One-size fits all	Place-specific	Objectives are relevant to particular system
	Citizen engagement	Limited consultations	Extensive collaboration	Decisions are more transparent to local stakeholders and more likely to receive lasting support
	Decision-making process	Linear, top-down	Integrative (both top-down and bottom up) and circular	Better integration of multiple values increasing the likelihood of consensus
	Follow-up	Limited	Adaptive management	Increasing opportunity to learn from experiences

Kidd *et al* 2011. p5

Figure 3.4 Characteristics of Traditional and Ecosystem Based Approaches

The difficulty with EBA in practice, however, is that "the incorporation of humans in ecosystems requires an understanding of social processes and human preferences just as much as the longer standing study of non-human ecology" (Mee *et al* 2015, p3). Furthermore, confusion lies in the application of EBA within MSP polices, with the EU

Marine Strategy, as the “environmental pillar of the EU Maritime Policy” employing the principle in order to provide “a supportive framework for national initiative towards spatial planning, *designed for achieving good status for the environment”* (Douvere 2008, p768 emphasis added)[23]. In practice, delivering an “ecosystem approach informed by marine science, which emphasises complexity and the need for holistic management” (Gazzola *et al* 2015, p1157) risks becoming burdensome when applied to real-world marine licensing determination, with the need to include the advice of multiple stakeholders within decision-making and consider whose ecosystem service provision is prioritised.

3.4.3. Cultural Ecosystem Services

Cultural ecosystem services (CES), are defined by the MEA as non-material benefits gained from the natural environment and are listed as recreation, spiritual, religious, aesthetic, educational, scientific, and existence values (Jobstvogt 2014 p99, de Juan *et al* 2017, p39). There appears here to be an acknowledgement that *all* ecosystem service benefits are anthropocentric in nature, and all but CES are materially beneficial. CES are seen as an important aspect “of cultural and amenity services as a whole, implying the non-material benefits people obtain from ecosystems through: spiritual enrichment; cognitive, emotional and social development; reflection; recreation; and, aesthetic experiences” (Tengberg *et al* 2012, p16).

Valuation of CES is notoriously inexact, and whilst the literature notes their value and importance in relation to the contribution they provide to the economies (Richie & Ellis 2010, p702), the qualitative nature of their value remains a challenge because “CESs are a result of peoples' ‘experiences’ and are hard to value economically.” (Fletcher *et al* 2014, p160). However, with reference to marine activity, “way of life can, and often does, trump ‘rational economic actor’” (Blount & Pitchon 2007 p110). In other words economic justification of a decision does not necessarily outweigh attachment to way of life, regardless of the financial value of the latter. Attempts have been made to

[23] Good Environmental Status (GES), attributed to the Water Framework Directive (European Commission 2000), relates solely to biological and chemical water quality within the coastal and nearshore marine environment, and whilst ecosystem benefits are derived from clean water, the use of the term ‘environment’ here seems absent of social and economic characteristics.

quantify marine CES either alone or within wider valuation studies of ecosystem services. In one example of exploring the value of ecosystem services within marine protected areas, a significance value was attached to each feature in relation to specific goods or services, along with a confidence level associated with the data. The confidence level attributed CES data was based mainly on expert opinion, as opposed to being quantifiably evidenced by peer-reviewed or grey literature (Potts *et al* 2014, p143). In addition to this attempt at quantification of CES, several case studies evidence both the importance of marine CES and their resistance to quantifiable valuation (Rees *et al* 2010, Dominguez-Tejo *et al* 2016, Fletcher *et al* 2014).[24]

The importance of the myths and spirituality connected to the marine environment for human wellbeing has been evidenced with reference to Polynesian, Aboriginal or Indonesian culture, with "many other cultures around the world having similar traditions" (Jones 2014, p11). An example here is the Polynesian notion of 'tabu' (sacred and inviolate) related to coral reef areas (Ibid). Others include the contribution to CES provided by 'charismatic species' such as seahorse, dolphin, seal, shark and whale (Potts *et al* 2014, p145), and the contribution provided by marine flora and fauna "in some cultural myth creation, storytelling and belief structures" (Fletcher et 2014, p152). The social value and interest of the marine environment cannot be overstated which is evidenced by the 'general interest' the public maintains in the marine environment (Hawkins *et al* 2016, p232) and the preference held for coastal environments evidenced by the economic and social wealth achieved through the 59% and 38% of ecosystem benefits derived from offshore and nearshore environment respectively (Dominguez-Tejo *et al* 2016, p115).

The separation of CES as a sub-category of intangible ecosystem services, seems arbitrary. They are both a category in themselves, and clearly inextricably related to the material services which an ecosystem provides. This position is not made any

[24] In Lyme Bay, Dorset, Rees *et al* (2010) evidence the social value of marine biodiversity with reference to local events and visitors' centres celebrating the marine environment, including the 2007 Charmouth Marine Week (Rees 2010). Fletcher *et al*'s 2014 Black Sea study in Turkey and Dominguez-Tejo *et al*'s (2016) Shetland Islands Study further evidence this, with Shetland Island survey data which "acknowledged the contribution of the marine environment to human health and well-being, through access to amenities and having 'a sense of place" (Dominguez-Tejo *et al* 2016) and the Turkey study collating data in which respondents repeatedly state words which are positively associated with the marine environment such as "peace", "freedom", "freshness" (Fletcher *et al* 2014).

clearer from the assertion that EBA "represents a shift from a single-species, extraction-oriented focus in resource management towards a more holistic philosophy that strives to balance the multiple interrelated dimensions of ecological integrity and human wellbeing" (Breslow *et al* 2016, p251). The importance of advancing CES is seen by some as a feedback loop in which "not only do healthy environments support humans, but the constant search for improved wellbeing influences the way people engage with the environment" (Biedenweg *et al* 2016, p31). This feels too convenient a way of circumventing the anthropocentric conceptual bases of ecosystem based approaches. Through the inclusion of a sub-category of ecosystem services entitled 'cultural', the intrinsic value of the others can be maintained. This has been noted in the more critical MSP literature, in which the 'reformist' agenda of MSP as a discipline has been suggested (Tafon 2018, p259). The inclusion of 'culture' as a sub-category of ecosystem services fails to acknowledge that EBA, along with the other key MSP practices of participation and planning regulation, are "sites of *politics* in which power functions through practice to further a particular preconceived vision of the world" (Ibid, 260, emphasis in original). In other words, *culture* creates ecosystem services rather than finding its place within them. And furthermore, the "knowledge that informs ecosystem-based governance is often *constructed"* (Ibid, p262 emphasis in original; see also Pomeroy & Douvere 2008).

The constructed nature of knowledge leads to considerations of the antecedent ethical positions on which these knowledge claims rest. Understanding the multiplicity of these underlying, and often tacit, belief systems is important in order to understand why conflicts regarding marine management arise. This is explored below.

3.5. The ‘Ethics’ of Environmental Ethics

Within EBA, the decision whether or not to grant consent for a marine development project is made within the sphere or broader considerations of how best to allocate and manage resources. This allocation and management appears to focus on goods and service provision for human survival and wellbeing. However, the ethical antecedents of this are open to debate. Indeed, as human survival and wellbeing depend on healthy ecosystems, ecosystems themselves benefit from management which supports human flourishing. If marine ecosystems are managed in a way which maintains their health and provides ecosystem services, does the motivation behind resource management decisions matter? This section argues that it does in virtue of the important relationship between values and actions within a given group, public or society.

At the societal level, “there are likely to be a wide range of beliefs about how best to allocate resources” (Brown *et al* 2002, p42). Understanding the foundations of these beliefs is crucial for understanding how decisions made by public regulatory bodies, such as the MMO, disentangle contradictory representations and arrive at decisions which are fair, meaningful and accepted as valid. In addition to the multitude of beliefs regarding environmental issues within a society, the complexity of ecosystem goods and services encompass benefits on multiple scales and for both human and non-human receptors and groupings. Individual preferences here are complicated or absent (Brousseau *et al* 2012, p1). Whilst marine policy aims to address these value-based conflicts at a strategic level, marine regulation requires engagement with this complexity at the point of conflict. This suggests that “the complex interactions of the highly diverse systems housed with even more complex ecosystems are […] a cue to up the ante against the simplified answers that are routinely trotted out by well-meaning organizations” (Probyn 2016, p25). The publicness of marine regulatory decision-making requires exploration of the values on which decisions are made. Crucially, environmental ethics explores the meanings behind concepts, such as ‘ecosystem services’ and ‘sustainable communities’ which appear to be accepted uncritically through the rhetoric of environmental agencies (Sagoff 2010 p394, 399; Probyn 2016).

Environmental ethics adds specificity to wider utilitarian, deontological, consequential and normative ethical theory. More broadly environmental ethics addresses normative

questions regarding the human/non-human relationship with “the moral status of Nature […] determined by the contexts within which nonhuman entities are incorporated into human cultural understanding” (King 2010, p352, capitalisation in original; Keller 2010; Soule 2010). Moral concerns surrounding issues of intergeneration justice, fairness, respect and compassion for the non-human world, and the preservation of the intrinsic value of environments are considered through contemplation of this relationship (Sagoff 2010, p392; Midgely 2003).

A utilitarian environmental ethic appears to complement marine decision-making within an EBA which supports “utilitarian objectives of sustainable development if not utopian ones… [and] appears to place nature on an equal footing with economic interests in debates about development” (Harrison *et al* 1999, p85). But basing decisions on ‘the greatest good for the greatest number’ remains problematic. Any such preference-satisfaction theory faces challenges regarding “the possibility that a person may be mistaken about what is best for her” (O’Neil *et al* 2008, p23). To address this, an informed-preference theory can be applied in which education can change personal values and opinions regarding the importance of system or receptor. For example, “on being educated about salt marshes I may subsequently come to value them a great deal, and this education might make a large difference to my well-being” (Ibid, p24). Although educator bias here could, again, cause ethical issues with the educator’s preference-satisfaction now being privileged. Furthermore, the challenge of incorporating ‘relevant’ individuals, groups, publics, non-human receptors, ecosystems into a utilitarian calculus requires additional justification. The relationship between environmental ethics and the public was introduced in Chapter 2 in relation to value judgements present within objector positions towards development. Whilst the concept of ‘the public’ appears anthropocentric, its relationship towards intrinsic environmental value is not necessarily to negate it. This relationship is explored below.

The response given to the challenges of utilitarian ethical models by deontological ethical theorists is to consider the *process* rather than the *outcome* of decision-making (O’Neill 2008; Seip & Wenstop 2006). For consequentialists the challenge requires recognition of the naturalistic fallacy by which subjective values are derived from objective facts about the world. For normative ethicists the virtues of *decision-makers themselves* are the subject of moral enquiry (Ibid). Discussion of these antecedent ethical positions falls outside of the remit of this current enquiry, however an

understanding that the ethical positions which, explicitly or implicitly, ground individual or group/organisational environmental value claims is an important notion to grasp in order to understand the perceived validity of marine regulatory decisions. Simply put, what ethical notions are decision-makers attaching to decision situations?

3.5.1. Environmental Ethics and 'Nature'

As a distinct school of ethical enquiry, environmental ethics is concerned with the human/non-human[25] relationship and, more fundamentally, the concept of nature itself. In this way "environmental ethics constitutes critiques of anthropocentrism – some positive, others negative" (Keller 2010, p1) and three main environmental ethical schools can be identified, as presented in Figure 3.5.

Environmental Ethical Position	Sphere of Ethical Concern
Anthropocentric	Environment as human resource
Biocentric	Moral consideration of animals and plants
Ecocentric	Moral consideration of all kinds of natural living things

Wilkinson 1999, p18

Figure 3.5 Three Categories of Environment Ethics

Environmental ethical positions form a spectrum of normative positions regarding the purpose of resource management. At one end is the value judgement that environmental degradation is seen as undesirable in relation to the harm it will cause to humans (Kortenkamp & Moore 2001, p262). At the other is the deep ecological positions which focus on the "rejection of the man-in-environment image in favour of the relational, total-field image" (Wilkinson 1999, p25; Morton 2010; 2016) and ascribe intrinsic value to ecological features (Kortenkamp & Moore 2001, p262). Countless shades of grey complete the spectrum.

[25] Or 'human/nature', but this latter term is problematic and this is considered throughout this section.

The moral consideration behind the desire to protect a particular ecological feature – due to an anthropocentric or ecocentric ethic – determines the reasoning behind the differing moral arguments for public objection towards development projects. In other words, both ecocentric and anthropocentric positions can, and do, lead to positive outcomes in terms of environment protection but “the difference in these two orientations is in the reasons given for supporting conservation" (Gagnon-Thompson & Barton 1994, p149; Bjerke & Kaltenborn 1999; Karpiak & Baril 2008). Understanding these motives is an important element of collaborative planning discussions. For example, public acceptance of the reintroduction of a predator species within an agricultural community is dependent on "the differential access to social power, conflicting ideas about private property, and divergent beliefs about nature" (Bjerke & Kaltenborn 1999, p415).

The language of much of the academic literature regarding environmental ethics paints anthropocentric attitudes as morally inferior to ecocentric positions in that “anthropocentrism is thought to be composed of not only a concern for human kind generally but also an *egocentric* concern" (Karpaik & Baril 2008, p206, emphasis added). For example, perceptions towards the reintroduction of wolves in America evidence that "sheep farmers, relative to wild-life managers and research biologists, more often agreed to items like 'too much emphasis has been placed on conservation', and 'I find it hard to get too concerned about environmental issues" (Bjerke & Kaltenborn 1999, p417). This study suggests that increasing education within ecological or biological fields is needed in order to increase understanding, and therefore the value given, to non-human life. Like the salt marsh example above, education here appears to hide the potential for the preference-satisfaction of the educator to privileged and the normativity of value statements here is clear. Within ethical positions related to the marine environment, and adding complexity to this, are positions that “acknowledge that the sea has an intrinsic importance… [which] accounts for a series of values and underpins the relationships and connections between humanity and the marine environment” (Gazzola & Onyango 2018, p1). Articulations such as this appear to ‘other’ the non-human marine environment, leading to the conception of humans as interlopers – or even invaders – rather than co-creators of this space.

Anthropocentric attitudes towards the environment find support within evolutionary sciences and bioethics which note that "from a Darwinian point of view, the first goal of humanistic ethics is clearly survival of the species, and current ethical dogma too often overlook this fact" (Chiarelli 2007, p105). In addition, ecocentric ethics can be critiqued in virtue of ethical theorising more generally. All ethical models, including those within the environmental ethics specialism, are axiomatically subject to the anthropocentric nature of value judgements in that “when we make decisions about the environment, we apply our own values; neither animals, nor plants nor mountains are sacred in and by themselves, but may be attributed a status of sacredness from humans” (Seip & Wenstop 2006, p150). This is not to delegitimise deep ecological perspectives, but rather to acknowledge that any, and all, human value judgements, regardless of their motivation, remain deeply embedded in individual and social relations. The meanings individuals attach to the natural environment are both profoundly personal and profoundly social. They are “intimately connected with our own life experience” (Harrison *et al* 1999, p86; Saengsupavanich 2012, p106; Stokes *et al* 2014) and also “[find] expression in local dialects and cultural practices, in metaphor, in literature, the visual arts, mass media and the texts of popular culture” (Ibid).

3.5.2. Working in the Anthropocene

In these environmental ethical discussions care is needed to ensure that representations of the intimate relationship between the human and non-human worlds do not imply a nature/culture dualism. The Anthropocene thesis addresses this dualistic presentation by capturing the “quantitative shift in the relationship between humans and the global environment" (Steffen *et al* 2011, p843; Crutzen & Stoermer 2010) in which stratigraphic empirical evidence of the impact of humans on the Earth represent the inability to decouple humanity from non-human Earth systems (Waters *et al* 2014, p17; Davies 2016, p2). The Anthropocene thesis comprises a broad-church of interrelated sub-disciplines from the breadth of academic study as illustrated in Figure 3.6.

Autin 2016, p222

Figure 3.6 What is the Anthropocene?

From this it is apparent that whilst disciplinary lenses differ dramatically, the Anthropocene thesis is successful in its reframing of the human/non-human environmental ethics debate, and the socially produced nature of 'nature' is thus implied. In addition to this, reflection on the 'democratic Anthropocene' – absent in the above list – highlights the construction (or production) of the Anthropocene as a human creation:

> "A democratic Anthropocene would mean a few things. First … the world of scarcity and plenty, comfort and desperation, *is not just where we live; it is also what we make*. Second … if Anthropocene ecologies are a political question, then no one should be left out of the decision that shape them." (Purdy 2015, p48, emphasis added)

Consideration is needed here regarding *who* is to be included within the 'we' that creates this world. 'Hostile critics' of the 'domineering universalism' present at the heart of the Anthropocene thesis accuse it of "downplaying the difference between Albertan oil barons and Malagasy subsistence fishers by suggesting that it is human beings in general who are responsible for ecological degradation" (Davies 2016, p41; Morton 2010). These 'hostile critics' do, however, make a valuable contribution to the Anthropocene discourse by considering the motives *behind* the human processes which have resulted in epoch shift evidenced by stratigraphers, and this again illustrates the inalienable connection between the human and non-human worlds both in relation to anthropic positioning in 'nature' and the values ascribed to this relationship. For example the 'Capitalocene thesis' utilises a Marxist world-ecology view to state that whilst "from an eminently reasonable position: the biosphere and geological time has been fundamentally transformed by human activity" (Moore 2016, p3). The Anthropocene thesis' reliance on "the *Anthropos*: humanity as an undifferentiated whole" as the source of the epoch shift introduces the problem of 'Green Arithmetic' in which "for the earth-system scientists behind the Anthropocene, Social Factors … are added; for scholars in the humanities and social sciences, Nature is added…Nature plus Society equals the Whole" (Moore 2017, p597 capitalisation in original[26]). By accepting that world ecology is a synthesis of society and the non-human world, a more holist appreciation of the value of the non-human world emerges (Moore 2014, p291; Hughes 2000).

Drawing on literature within these themes fulfils two purposes. Firstly, it situates MSP as a governance mechanism operating within a complex, and inextricable, web of human/non-human interactions, and the historical materiality of the marine

[26] Moore's use of capitalisation intends to portray the contested nature of these terms (Moore 2014).

environment. Secondly, it begins to critique regulatory processes which separate human and non-human impacts.

There is however a concern regarding the Anthropocene narratives' foundation, based on Crutzen & Stoermer (2010), as a stratigraphic marker for a new geological epoch in which the human/non-human worlds become inextricably linked (Malm & Hornborg 2014). Care is needed here to avoid implying that there was a *time before* the "golden spike" (Steffen *et al* 2011, p843 Autin 2016) when a decoupling (pre-coupling) between humanity and non-human Earth systems existed. Critiques such as the Capitalocene, or 'Pryocene' – where the marker for the inability to decouple humanity from non-human Earth systems is identified as when "hominins could make fire at will" (Pyre 2014) – extend the period of this epoch outside of the fossil records and into the social process which gave rise to the eventual empirical geological evidence. However, there still remains in these a *time before* in which physical Earth systems were separated from human interference. This is misleading and unhelpful and this is explored throughout the remainder of this chapter in relation to the construction of knowledge about the marine environment.

3.5.3. Ethics, Anthropocene and Decision-Making

Central to this ethical discussion is the recognition that decision-making not only includes the values of the decision-maker, but also a comprehension of those of the stakeholders and publics involved – willingly or unwillingly – in the process. For marine licensing it is therefore important to acknowledge that different environmental ethical positions, and indeed different antecedent ethical theories, affect the values which are attached to the subject of the decision situation.

The language of ethics is useful here in articulating that, at its core, governance and decision-making "has to do with determining what ends and values should be chosen and the means by which those ends and values should be pursued" (Hanf & Jansen 1998, p3; Gregory & Keeny 1994). When this is linked with procedural justice (discussed in Chapter 2) there is an increased likelihood that stakeholders will accept decisions which would ordinarily contradict with their core interests and values "so long as the procedure is perceived as fair and legitimate." (Fritsch & Newig 2012, p185). This latter contention applies a deontological ethical view to decision-making in which the *process* rather than the *outcome* is the subject of ethical concern. Noted here is

the deontological position that it is the *process* which is subject to ethical consideration with imperatives attached to ensuring that the process itself is morally right.

Working with the Anthropocene thesis gives additional resonance to the environmental ethics debate regarding nature/culture and non-human/human separations because whilst "humans have a tendency to divorce our existence from that of natural phenomena … the Anthropocene provides a relation about our existence as we bury past myths about our relationship with nature." (Autin 2016, p224). Care must be maintained here to ensure that the critiques levied at this narrative regarding the temporal resolution of the human/non-human separation do not lead to use of premises in which Earth systems were, at some mythical time, devoid of human (or pre-human) influence. Working with such premises provides little utility for the assessment and management – or mitigation – of environmental impacts as the 'baseline' for assessment falls outside of empirical reach. Regardless of the perpetrator of the impact "life has *always* been a geophysical force; equally, the geology of the earth, unlike that of Venus, has been influenced by the laws of biological evolution for an inordinate length of time" (Davies 2016, p60, emphasis in original). Working with humans *in* the environment, rather than human *and* the environment allows for this research to justify its application of public space theories to MSP. This maintains intrinsic value in the marine environment and allows for both consequentialist and deontological interpretations of ethical decision-making. This inalienable relationship between humans and the marine environment is considered below in relation to scientific understanding of and impacts on the marine environment, and also in Chapter 2 in relation to the socially produced nature of marine space itself.

3.6. Understanding the Marine Environment

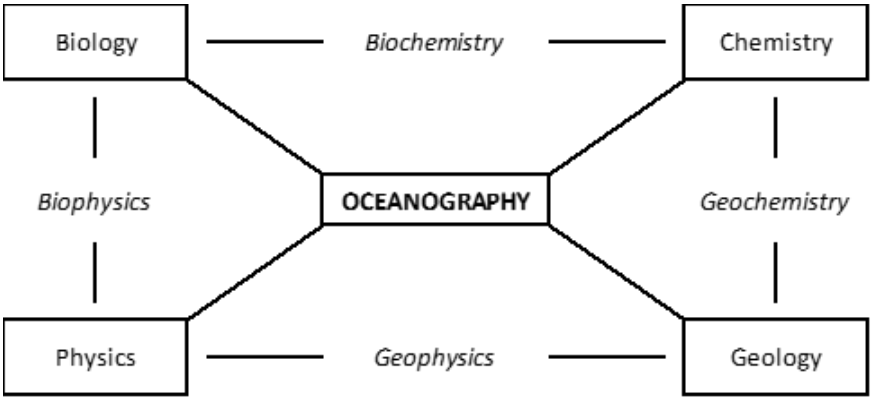
This section develops further discussion regarding the inalienable relationship between humanity and marine systems. Exploring how natural scientific knowledge of the marine environment has developed alongside and often due to human development and use of the seas provides a fundamental basis for exploring the impact assessment techniques used to assist marine licensing decision-making. The separation of cultural impact from natural scientific impact is also explored, highlighting how the separation

of empirical – physical, chemical, biological, geological – impact from cultural impact demonstrates a misrepresentation of the value of marine space.

Understanding the context of oceanic knowledge and development is important for this current research because “the history of human activity is part of the narrative of the natural history of the area” (O’Neill *et al* 2008, p161). Strong links between the sea and human identity are evident:

> “The sea has indeed been central to the development process throughout all of modern times, beginning in the late fifteenth century. Thus coastal settlements and communities have as often as not been highly specialised and dependent on the sea – especially shipping and ports, naval activities, fisheries and leisure industries.” (Smith & Potts 2005, p2).

Knowledge of the oceans has been formed through the sub-disciplines which are encompassed under the wider field of oceanography illustrated in Figure 3.7. The additional disciplines of archaeology, history, economics, engineering, and latterly marine planners and regulators adding extra dimensions to this complex area (Duxbury *et al* 2002, p2, Pinet 2013).



Pinet 2013, p4

Figure 3.7 Marine Science Disciplines

A sound knowledge of the physical, chemical, biological and geological marine environment is crucial for making sustainable socioeconomic decisions related to activities situated in the sea (Schiller *et al* 2016, p1553; Weyl 1970; Hardinsty 1990;

McBreen *et al* 2011). Aside from economic decision-making, mastery over the seas in relation to transport and use of marine resources, is strongly linked with advances in human history in which use of the marine environment has "become a part of daily human existence" (Bowen *et al* 2014, foreword). Advances in oceanography are inextricably linked to human development. Where early oceanographers[27] worked to understand the marine environment for the benefit of human progress[28], contemporary marine scientists, and indeed the wider public consensus, presents a rather different view which seeks to "comprehend the ecological effects of human activities that impact upon them and more widely on global systems" (Kaiser & Williams 2011, pvii). The importance of recognising the connection between marine use and marine science raises a recurrent theme within this thesis, namely questioning the neutrality of science (Midgely 2003, p3). Considering the ethical discussion above the myth of the value-free nature of science is a useful acknowledgement to make (Ibid)[29].

3.6.1. Anthropologic Impacts on Marine Systems

Traditionally, the world oceans have "been taken for granted as a source of wealth, opportunity and abundance" (IWCO 1998, p15). Aligned with Anthropocene narratives, this is no longer the accepted position. As introduced above, the paradigmatic use of the EBA sees protection of physical, chemical and biological marine processes as important for the protection and continuation of the ecosystem services, with an inherent anthropocentricism to the approach.

The main impacts of direct human activity in the marine environment are outlined in Figure 3.8[30] and are broadly categorised as being caused by the introduction of

[27] The Challenger voyage of 1872 is most often cited as the birth of modern oceanography (Byantt *et al* 2001, p23).
[28] This term is used uncritically here.
[29] That said, myths are powerful things and their importance for identity building and place making cannot be overemphasised. This becomes important within the Goodwin Sands case study presented in Chapters 7 and 8.
[30] Notably absent here is anthropogenic climate change through the combustion of fossil fuels, the consequences of which include "increasing global temperature, perturbed regional weather patterns, rising sea levels, acidifying oceans, changed nutrient loads and altered ocean circulation" (Brierley & Kingsford 2009, 603; Thomas & Bowers 2012; Bijma *et al* 2013, Defra 2010g). Whilst anthropogenic climate change impacts, particularly related to sea level rises and coastal flooding, and the associated need for development of ever more sophisticated coastal defence schemes, is clearly a pressing environmental issue, further consideration of climate change falls outside the remit of this current research.

substances into the oceans, the removal of resources from the oceans and disturbance of the marine ecosystem (Halpern *et al* 2008 p948).

Category	Activity	Impacts
Removal of resources	Offshore oil and gas	• Input of oil and polycyclic aromatic hydrocarbons • Input of other hazardous substances • Physical disturbance
	Marine aggregates	• Mineral extraction (sand, gravel)
	Fisheries	• Removal of target species • Seabed disturbances • Effects of discards and mortality of non-target species • Input of litter (ghost nets)
	Mariculture	• Introduction of cultured specimen, alien species and diseases • Input of chemicals • Input of nutrients and organic material
Introduction of substances to marine environment	Renewable energy	• Loss of seabed habitat • Power cables and electromagnetic disturbance • Impact on birds
	Engineering operations	• Construction in the coastal zone • Dumping of inert material
	Maintenance dredging and disposal	• Physical disturbance • Dispersion of substances
	Inputs from land	• Nutrients (Eutrophication) • Heavy metals • Oil and polycyclic aromatic hydrocarbons (PAHs) • Organic micro-pollutants • Microbiological pollution and organic material • Radio-nuclides
Disturbance of marine ecosystem	Shipping	• Introduction of alien species • Inputs of TBT and other anti-fouling substances • Physical disturbance • Input of oil and polycyclic aromatic hydrocarbons • Input of other hazardous substances • Input of litter
	Military activities	• Ammunition • Physical disturbance
	Recreation	• Input of litter • Physical disturbance

Defra 2004, p98

Figure 3.8 Direct Human Impact on the Marine Environment

Noted here is the distinct tangibility of these impacts, and despite ecosystem thinking encompassing cultural goods and services, these are absent from this policy-derived summary.

The marine sciences summarised above provide evidence of anthropogenic impact to marine systems. However, such impacts are meaningless without a cultural and ethical perspective attached to them. Indeed consequential ethical approaches usefully warn here of the naturalistic fallacy. The physical impact is known – *seabed habitat is lost by a development project* – but adding a value judgement to this – *seabed habitat should be protected* – requires an additional step. Here, again, ethical judgements are key.

3.6.2. The Cultural Marine Environment

Marine archaeology and maritime socio-historic narratives add insight into how the marine environment has shaped cultural identity and the evolution of human conceptualisation of the seas (IWCO 1998, p25). An example found in the prolific marine archaeological literature concerns to the shallow Dogger Bank area of the Southern North Sea. The Dogger Bank, located 60 miles east of England contains the prehistoric Doggerland, a terrestrial landmass until c11,000 years ago. This "inundated prehistoric terrain of the North Sea basin remains one of the most enigmatic archaeological landscapes in northwest Europe" (Gaffney *et al* 2007, p1) and marine activity, specifically aggregates extraction, has resulted in numerous archeologically significant finds (BMAPA/EH 2003, p4; Wenban-Smith 2013).

The flooding of Dogger Land illustrates how significant the marine environment is in relation to developments within human history, with the contemporary North Sea coastal landscape the result of 13,000 years of melting ice and sea level rise (Kirby & Hinkkanen-Lievonen 2000, p6). Knowledge and preservation of this area is important for understanding of prehistoric coastal communities, providing evidence of early human use of the marine environment for resource gathering and in particular fishing (Ibid, p398). The Dogger Bank archeological finds serve as direct evidence of the important, and long-standing, relationship between humans and the sea (Dellion-Musgrave *et al* 2009, p34). The mysteries of Doggerland also resonate with myths of submerged worlds and biblical tales of "the loss of whole countries and peoples, frequently as an act of divine retribution on degenerated and ungodly societies" (Gaffney *et al* 2007, p129). This belief in the sea as worthy of human respect – or fear –is deeply ingrained, and forms part of the complex cultural relationships between humans and the sea. Indeed, this is still somewhat true today as "when the seas hit

the headlines… somber or dark overtones tend to be in the ascendant" (Kirby & Hinkkanen-Lievonen 2000, p261). Contemporary news reports warning of the potential for severe coastal flooding when storm surges coincide with high water spring tides are testament to this (BBC 2019).

Whilst the finds at Dogger Bank serve to evidence early human maritime life, it is from medieval times onwards that humans became more significant agents of change to the marine environment. As sea trade became more prosperous, ports became ever larger to accommodate demand. So too did the impacts of shipping on the marine environment, particularly at the coast. In London, whose River Thames is tidal and thus forms part of the marine environment, the accumulation of silt and rubbish made it increasingly difficult for larger vessels to enter port and so quays became necessary to provide the depth of water required for such vessels. Evidence of this type of “creeping waterfront” in both London and Newcastle-upon-Tyne can be found with the inference such evidence at other English coastal towns (Friel 2003, p69). Evidence of the use of marker buoys and poles in medieval England to mark safe passage through shallower waters also exists although “very little is known about it” (Ibid, p87). The shallow waters on the approach to English ports required knowledge of tide times to ensure safe passage. Evidence of 13th century tide tables for high water at London Bridge exist and have been credited to St Alban’s abbey monks (Kirby & Hinkkanen-Lievonen 2000, p16). Whilst crude, these tide tables serve not only as proof of an increasing commercially driven knowledge of the marine environment but the links between Christianity and the sea. Christian theology itself has seen the seas as both “the source of life and a terrifying vision of death” (Ibid, p41).

Rooted in antiquarianism and souvenir hunting, marine archaeology aims to preserve all historically or archaeologically important offshore sites including both the prehistoric landscapes – such as Doggerland – and shipwrecks from all eras of human history (Jones 1978, p322; Pater & Oxley 2014). In this context “wrecks are 'time capsules', sealed depositaries of historical information" (Ibid, p323) and provide insight into past maritime cultures and societies, commerce, politics, society, technology and “the day-to-day lives of individuals on land as well as at sea" (Newell & Woodcock 2013, p57). As such, marine cultural heritage has both tangible – sites, wrecks, fishermen, sailors, port staff – and intangible – wellbeing, spirituality, identity – components. Wellbeing services find historical context in the attraction of inland populations to the English

coasts increased throughout the 18th and 19th century and from this period originate many famous artistic representations of the marine environment. William Powell Frith's *Ramsgate Sands* (1854), included as Figure 3.9, depicts a panorama typical of this era, in with advances in terrestrial rail travel allowed increasing masses of people to access the coasts (Kirby & Hinkkanen-Lievonen 2000, p47). Romantic representations of the marine environment depict it as something to be enjoyed, rather than feared. The wild, natural, or God given seas are thus sanitised and tamed for the inland masses to enjoy.

Royal Collection Trust 2019

Figure 3.9 Ramsgate Sands (Life at the Seaside) (1854) William Powell Frith

The complex relationship between the human and non-human marine environments is clearly seen in the juxtaposition of such Romantic notions of the marine environment and the "essentially English" seaside holiday (Kirby & Hinkkanen-Lievonen 2000, p52) with the everyday lives of fishermen and sailors. In this historical context, the question of for whom, or what, the sea is *for* finds validity. For example, in relation to English coastal tourism in the 18th and 19th centuries the view was prevalent that "fisherfolk and their boats and nets might well be picturesque, but they also created a stink and a clutter" (Ibid, p51). This attitude still resonates today in the multiple imaginaries found

within coastal developments where development practices and the sandy beach idylls collide (Karleskint 1998; Crawford 2018; Davoudi 2018).

Marine heritage interest in English seas continued to grow into the 20th Century with treasure hunting holidays in the 1950's leading to a dominance of "submarine melodramatics and curio collecting" within marine archaeology (Jones 1977, p322). A general public interest in the historic uses of marine areas finds more contemporary evidence through heritage tourism which has led to the preservation of the maritime history of selected coastal areas (Khakzad *et al* 2015; Gee *et al* 2017; Papageorgiou 2018). The regeneration of 'Old' Portsmouth and Liverpool's Albert Docks provide examples here however "if what is being presented to the visitor in the waterfronts is a much diluted and prettified version of maritime life, it probably serves only to confuse our notions of maritime tradition" (Kirby & Hinkkanen-Lievonen 2000, p256). The sanitised and nostalgic narrative evident within the general gentrification of coastal landscapes and industrial developments is problematic for preserving marine heritage and the historical relationship between people and the sea:

> "The uneasy balance of contradictory representations is largely achieved by portraying the urban waterfront as a space of *historical* social activity but one that is now devoid of any human interaction. Evidence of contemporary labour, production, or transportation – dockyards, fish markets, container terminals – would contradict the ocean's separateness, and so designers of festival marketplaces consciously obscure such signs of contemporary marine activity while flaunting the safely historical" (Steinberg 1999a, p418)

Attempting to separate marine heritage impacts from marine environmental system impacts decouples humans from the sea. Whilst increasing knowledge of physical, chemical, biological and geological marine systems is beneficial for understanding anthropogenic marine impact, maritime heritage is an equally important part of the context in which contemporary coastal and offshore development occurs. Maritime heritage incorporates "the material, the social and the mindsets of the traditions" (Smith & Potts 2005, p11) and produces the value judgements on which impacts are assessed. Despite the 're-coupling' of humans and the environment seen within Anthropocene narratives, and despite the inclusion of cultural goods and services as impact receptors with EBA, the separation between marine environmental sciences and marine cultural impact remains. Further to this "while the ecological and economic evidence base for MSP tends to be relatively well developed, this cannot be said for

socio-cultural values associated with the sea, understood … as mainly immaterial values placed on the environment by people" (Gee *et al* 2017, p140; Firth 2015).

This section has illustrated the category mistake inherent in attempts to separate heritage concerns from wider environmental (ecological) concerns. In it, therefore, necessary to base marine decision-making on a comprehensive approach which incorporates both the human and non-human elements of marine environments. Throughout this chapter EBA has been discussed as purporting to provide such an holistic approach and thus this ethical digression has been necessary to explore the foundations of this approach. This chapter now returns from this important ethical tangent to its main governance focus, and considers the second key component of MSP, namely stakeholder engagement. This is crucial in order to bring together the publicness discussions in Chapter 2 and the ethical discussions presented in this current chapter.

3.7. English Marine Governance

> "Planning over the last twenty-five years has become increasingly environmental with the mainstreaming of sustainability, which has only served to make planning problems more wicked." (Marcucci *et al* 2012, p408)

EBA is a key approach within MSP to realising the aim of creating a "comprehensive approach to managing the seas in a sustainable manner" (Richie 2014, p666; see also Pomeroy & Douvere 2008; Maes 2008; Borger *et al* 2014; Jay *et al* 2016). In England, MSP shares many of its founding principles of TSP as implemented by the New Labour Government with its emphasis of stakeholder engagement and sustainable development (Richie 2014, p666). Crucially, MSP moves away from sectoral based management approaches to the regulation of marine activity (Douvere 2008, p762; Douvere & Ehler 2009, p78; Smith *et al* 2012, p30), criticised for its lack of integration between sectoral uses of the seas (Potts *et al* 2012, p5695; Ritchie & Ellis 2010, p703). Management of English seas in a spatial way is not an entirely new concept though, with pre-existing spatial designations for shipping routes, military exclusion zones, pipeline and cable routes, aggregates extraction sites, disposal sites and protected wreck sites and conservation designations (Smith *et al* 2012, p41). However, as discussed in the previous section, the shift away from sectoral management to a more holistic attempt at assessing impact and managing development, raises its own set of

challenges. As the quotation at the start of this section implies, adding complexity to management approaches increases rather than decreases the 'wicked problems' of attempting to maintain all stakeholder and receptor interests (Rittel & Webber 1973; Jentoft & Chuenpagdee 2009). In this way MSP "allows sectoral pressures on marine spaces and resources to be managed more effectively" (Smith & Brennan 2012, p210, see also Jay 2018).

The sector based management approach utilised in England prior to the enactment of the Marine and Coastal Access Act 2009 (MCAA2009) (HM Government 2009) reflects the perception of the sea as resistant to human control and as such historically regulated in a far weaker way than land areas (Jay 2010, p175). The seas were perceived as a commons; a common pool resource and therefore "beyond the reach of settled state functions like planning" (Ibid, see also Elliot 2004 p9, reference to G. Hardin's *Tragedy of the Commons*). There appears to be a contradiction here, with terrestrial seas subject to regulatory processes *whilst, at the same time,* the impacts of these processes are seen as of little consequence given the nature of marine space. Sectoral management appears concerned more with economic regulation than environmental protection. Against this backdrop of sectoral marine management, marine spatial planning posited a raft of benefits, from better "integration of marine objectives" to a "more efficient and accountable licensing system" (Gilliland & Laffoley 2008, p788; see also Jay 2010, p178).

A key area for policy development in England has been the growth in the offshore wind sector (Barry *et al* 2008, p70; Jay 2011, p4125; Hull 2013, p503; Scarff 2015, p96; Turner *et al* 2016, p168). Both MCAA2009 and the Marine Policy Statement (MPS) (HM Government 2011b) can be viewed as a direct result of the "desire to expedite the development of marine offshore renewable energy" (Turner *et al* 2016, p168), understood in relation to New Labour policy vision to bring about sustainable economic development and a low carbon economy through ecological modernisation (Hull 2013, p512; Ritchie 2014, p667). The 2003 Energy White Paper, 'Our Common Future', thus provided "policy support makes the technology [offshore wind farms] investible" (Kern *et al* 2014, p635; see also Heeps 2005, p79) with key economic and political actors' interests were satisfied through this policy support. Offshore wind farm developments within Crown Estate Rounds One and Two (The Crown Estate 2017) were subjected to a cumbersome consents process (Scraff 2015, p96), with no clear framework for

consenting such projects outside of the 12 nautical mile territorial limit. (Drankier 2012, p20). Round Three, where proposed projects were larger scale and positioned increasingly offshore, therefore required amendments to UK legislation to be made to allow for construction of turbines outside of 12 nautical miles.

It is striking how under-appreciated MCAA2009 was in terms of it being a "milestone in environmental regulation in the UK" (Richie & Ellis 2010, p701; see also Jones 2012, p249; Richie 2014, p667, Boyes & Elliot 2015, p64) and Marine Management Organisation (MMO), the English public body vested to deliver the Governments marine management vision, should be noted as one of the few QUANGO's to survive the Coalition governments 2010 'bonfire of the QUANGO's' (The Guardian 2012).

The MSP system in the UK aimed at managing marine interests "in a more coordinated fashion" (Jay 2011, p4128). It aimed to "balance the development of maritime activities and increase cross-border cooperation through transparency, clearer legislation, better coordination between administrations, and the early identification of impacts that can arise from the multiple use of marine space" (Pinarbasi *et al* 2017, p83). As a public process for "analysing and allocating the spatial and temporal distribution of human activities in marine areas" (Ibid), MSP thus aims to achieve the goals of sustainable development as specified through English political processes (Ibid). Evidence of how the implementation of MSP through MCAA2009 has simplified developmental regulation in the English marine area can be seen in advancement of the offshore wind industry. However, this marine governance approach is not without its critique.

The ideological context within which MSP has been implemented in the UK plays an important role in understanding its proclaimed purpose (Ritchie 2014). Noting that "management of ecosystems is a vision-based process" (Mee *et al* 2015, p5), MSP can therefore be seen as the New Labour vision for how the marine environment is to be governed. Rhetorical analysis of early UK MSP documents led to the conclusion that "the [MSP] discourse reveals subtle expressions of New Labour ideology, through a desire to create better regulation, better business, expertise, a modern marine economy, producing more economic returns with sustainable development at the heart of the system and in fighting climate change, which also brings echoes of ecological modernisation" (Ritchie 2014, p669). It is clear from considering offshore wind as a key policy driver, that ecological modernisation is firmly contained within English MSP.

Earlier rhetorical analysis regarding the offshore wind industry presents a similar argument: “The official discourse can be summarized as holding that ‘climate change and energy insecurity are problems, but we’re working on it, we know what we’re doing and while more needs to be done, we’re going in the right direction.’” (Barry *et al* 2008, p89).

This national policy context is also nested within European and international law (Smith *et al* 2012, p44), adding further complexity to the governance framework. At an international level the United Nations Convention on the Law of the Sea (UNCLOS) (United Nations 1982) “provides an international framework for the conservation and management of marine living resources.” (Maes 2008, p804). Other key international agreements include the London Dumping Convention (IMO 1972) and MARPOL (IMO 1973) (Boesch 1999, p190; Elliot 2004, p13). At a regional level the OSPAR Convention (OSPAR 1992) is also used to protect the marine environment from the impacts of unregulated disposal of wastes, including maintenance dredge material. At a European level the Marine Strategy Framework Directive (MSFD) (European Commission 2008) set a timetable for member states to enact MSP within their national legislation (Hull 2013, p503).

At the national level, Scottish, and more recently Welsh, devolution has resulted in separate policy setting and the creation of Marine Scotland and Natural Resources Wales to manage devolved seas. To remain focused on the policy context within which the main Goodwin Sands case study within this thesis sits, and unless specified to the contrary, the marine policy discussed throughout the remainder of this thesis is the English system.

3.8. Collaborative Marine Governance and the Involvement of Stakeholders

Managing competing ecosystem services, and stakeholder claims to them, alongside the application of EBA to the marine environment, is an important pillar of MSP (Flanney & O Cinneide 2012). This section explores the role of advisors within marine governance, focusing on the organisations and stakeholder groupings themselves rather than the legitimacy of their advice claims and the process through which competing advice and values are mediated within decision-making. As such this

section considers *who is involved* within MSP decision-making, with the processes of engagement discussed within Chapter 6. The academic literature is sparse in relation to stakeholder involvement in marine licensing decisions and this thesis works towards addressing this literature gap.

Whilst the Marine Management Organisation (MMO) acts as the English regulatory body for marine planning and marine licensing, it governs the marine environment following the advice of its statutory advisors. Indeed, through its very definition as the application of EBA to the marine environment, MSP "requires extensive inter-organisational coordination and collaboration, both between government agencies and jurisdictions and between ocean users, advocates, subject matter experts, and other stakeholders (Smythe 2017, p11). Both the marine planning and marine licensing processes include the duty to include stakeholder engagement and consultation, however "pressure groups, non-governmental organizations, think-tanks, government departments, business and 'stakeholder' interests all produce different, and possibly competing, kinds of knowledge" (Finlayson 2009, p12)[31]. A map of the broad interest groups within the community of stakeholders who should be included within decision-making processes includes local coastal residents and those with ownership or development interest in a marine area, commercial and recreational marine users, regulators and statutory bodies, national and regional interest grounds, and "scientists, consultations and educators" (Hull 2013, p521). Interestingly, 'the public' as a specific group does not feature in this list but is rather subsumed into various other groupings. Marine stakeholder identification is a contentious area because "strictly seen, every individual is a potential stakeholder" (Pomeroy 2008, p817). This statement appears to concede that the seas are a 'commons' which, as stated above, appears contradictory to marine regulation particularly within older sector based management regimes.

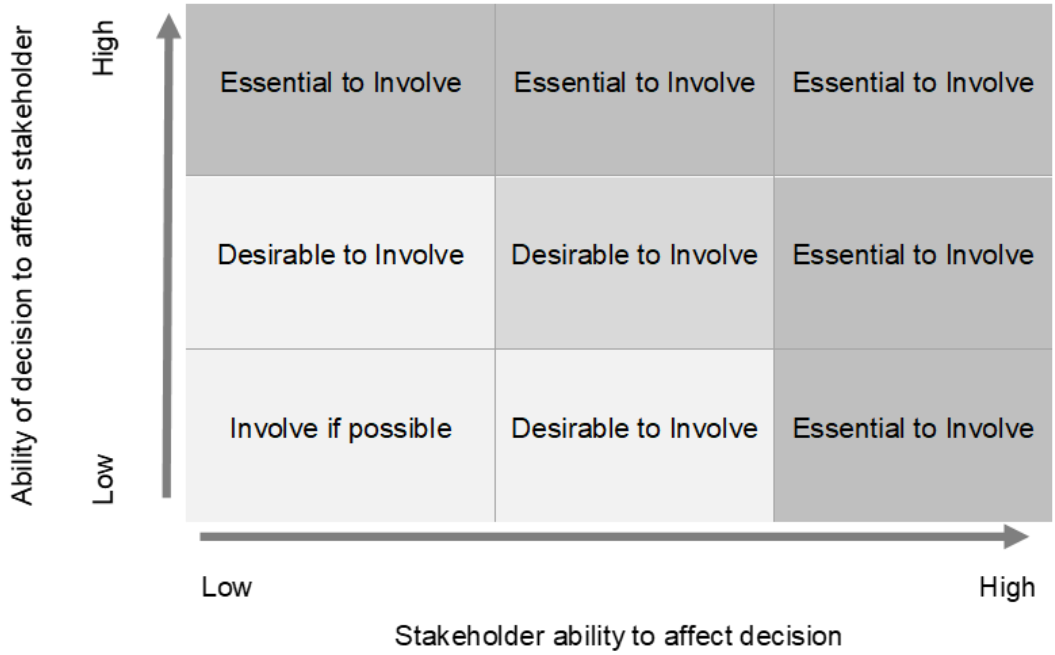
As MSP, at a strategic level and at a development consent level, attempts to manage the marine environment and resolve marine user conflicts "there is much at stake – who and what count as citizens of the ocean?" (Boucquay *et al* 2016, p1). Research into the impacts of MPA management on fishermen noted that "some fishermen …

[31] 'Stakeholder' is defined broadly here and includes the general public

argue that members of the public, with only indirect marine interests, do not have a sufficient understanding of the seas and the activities that they support, and so should not be involved in decisions that directly affect users" (Jones 2006, p2). The debate then becomes concerned with who is 'best placed' to make value judgements about the marine environment. The MMO is tasked with managing competing interests and, as a public body, "people (e.g., taxpayers and officials who represent them) pay for marine spatial planners who understand enough about marine ecosystems to maintain or recover what people value" (Crowder & Norse 2008, p775). These debates regarding which publics to include in marine debate return throughout this thesis.

Definitions of 'stakeholder' usually contain a statement regarding their interest in, or potential to be impacted by, a development project (Brown *et al* 2002, p65; Munro *et al* 2017, p10). Expanding on this, 'stakeholder' can be defined as "a person who has the right and capacity to participate in the process; thus anyone who is impacted upon by the action of others has a right to be involved" (Aas *et al* 2005 p31). This adds a further, ethical, dimension to the narrow definition along with the need for decision-makers to ascertain both the actors (individuals, groups, organisations, communities) for whom an impact (either beneficial, or harmful) is possible. Within participatory democracy, such actors have the right to have a "place at the table" (Sohlosberg 2003, p93), however this can, and often does – particularly in contentious or uncertain cases – lead to a 'democratic dilemma' whereby a balance between effectiveness and participation is sought (Fritsch & Newig 2012, p182). Too many, or too wide, a group of stakeholders and the consultation process becomes unwieldy; too few, or too narrow, and participation fails to account for the various interests surrounding the outcome of a decision.

The inclusion of stakeholders, and the extent to which they are included within a decision-making scenario depends on their power, legitimacy and urgency with regards to the decision being made. Primary, or definitive, stakeholders should be *included* in the process, secondary or expectant stakeholders *consulted*, and external or latent groups or individuals kept *informed* (Brown *et al* 2002, p67). Consideration of both the ability of the decision to affect a stakeholder and the stakeholder's ability to affect the decision is needed when determining the involvement level required for potential stakeholders, as illustrated in Figure 3.10.



Conroy & Peterson 2013, p60

Figure 3.10 Involvement of Stakeholders

There is a clear subjectivity inherent in this, and therefore, when in doubt about the category to which a stakeholder belongs, decision-makers tend to include the group or individual primary, given them full inclusion into the process (Conroy & Peterson 2013, p60). Within marine licence determination, as with all planning decisions, this precautionary approach to handling stakeholder interest can indeed inflate the legitimacy of a stakeholder claim and thus may impact on the decision being made. The importance of stakeholder identification, and correct categorisation of stakeholders, is crucial to a transparent decision-making process in which "groups who are likely to benefit from biasing the decision-making process are likely to request to be included" (Brown *et al* 2002, p73). The subjectivity related to who to involve as stakeholders can lead to "disagreements on who shall [be] given right to participate [which] can never be fully resolved" (Fritsche & Newig 2012, p186).

Evidence that the public perceive that “environmental groups and scientists are … the most competent to manage the marine environment” (Potts *et al* 2012, p5695) necessitates the need for the science on which decisions are based to be reliable and accurate. However, it has been observed that “the growing number of challenges [within Marine Science literature] is a significant trend that undermines the previous apparent 'consensus' amongst the scientific community" (Jones 2014, p47). Anecdotal evidence from the marine scientists appears to show an ideological bias in which research papers with conclusions contrary to national policy objectives were rejected: "it takes more time and effort to get a non-significant result published and … in conceiving a research project, scientists may frame their study in a way that maximises the likelihood of significant results" (Ibid, p36). Self-censorship of academic and scientific papers appears to bias published research towards those supporting government policy as these are more likely to be published (Ibid, p38-9). This is concerning. If scientific researchers are presenting their research as value free they must be separate from the normativity of policy making (Plasman 2008, p811). Marine governance uses scientific advice within its regulatory regimes, and so if this advice is biased towards supporting policy objectives, the transparency of the governance processes themselves are undermined.

Returning to statutory marine advisors, complexity is clearly evidenced within attempts to map the Government departments included within the consultation process for marine matters (Boyes & Elliot 2015, pp59). This mapping makes clear the number of interests present within the marine licensing arena, and the full extent of government interest in marine matters. Crucially for this current research, this mapping shows how many agencies of the Defra ‘family’ have an interest in the marine environment. Whilst the MMO operates as a non-governmental public body, there does appear from these organisation charts to be a tension between the MMO’s independence and its position within wider governance and policy networks. The original mapping has been updated for this research and is presented in Figure 3.11, overleaf.

	Ministerial Department	Agency/public body	Description
UK Government	Department for Business, Energy & Industrial Strategy	Committee on Climate Change	Advises the government on emissions targets and reports to Parliament on progress made in reducing greenhouse gas emissions.
		Government Office for Science	Advices Government based on best scientific evidence and strategic long-term thinking
		Met Office	UK's national weather service
		Oil and Gas Authority	Works with the industry and government to maximise the economic recovery of UK oil and gas
	Department for Digital, Culture, Media & Sport	Historic England	Statutory adviser on historic environment
	Department for Environment Food & Rural Affairs	Centre for Environment, Fisheries and Aquaculture Science	Collects, manages and interprets data on the aquatic environment, biodiversity and fisheries
		Environment Agency	Work to create better places for people and wildlife, and support sustainable development
		Joint Nature Conservation Committee	Statutory adviser on UK and international nature conservation
		Marine Management Organisation	**Licences, regulates and plans marine activities in the seas around England so that they're carried out in a sustainable way**
		Natural England	Government's adviser for the natural environment in England
		Sea Fish Industry Authority	Supports the seafood industry to work for a sustainable, profitable future
	Department for Transport	Maritime and Coastguard Agency	Prevents loss of life on the coast and at sea through legislation and guidance
		Trinity House	General Lighthouse Authority; provides marine navigation aids
		Marine Accident Investigation Branch	Investigates marine accidents involving UK vessels worldwide and all vessels in UK territorial waters
		Harbour Authorities	Planning authorities within Port limits
	HM Treasury	National Infrastructure Commission	Provides impartial, expert advice on major long-term infrastructure challenges
	Ministry of Housing, Communities & Local Government	Planning Inspectorate	Nationally Significant Infrastructure Project planning applications
		Local Authorities	Planning authority to Low Water Mark
	Ministry of Defence	UK Hydrographic Office	Centre for hydrography, specialising in marine geospatial data
		The Oil and Pipelines Agency	Manage, operate and maintain 6 Naval Oil Fuel Depots and a Petroleum Storage Depot

Based on Boyes & Elliot 2015, pp59; data from www.gov.uk

Figure 3.11 Government Departments with Responsibilities for the Marine Environment

The complexity of the statutory advisor, and wider stakeholder, network within the marine governance structure, and the place of the MMO in relation to other government departments with marine remits, raises questions regarding the independence of the MMO and the transparency of both the advice given and the decisions made within marine management decision-making. Further consideration is needed here regarding the status and role of evidence within the decision-making process and the antecedent ethical judgements regarding the value of this evidence.

MSP implementation in England embeds political motivations into strategic marine planning and decision-making. Marine licensing is thus nested within MSP, wider spatial planning theories and practices, environmental governance mechanisms and the socio-political national context. It is important to give consideration to how 'public' each of these nested levels are and the extent to which stakeholders rights to engagement as part of the governance approach are protected. But this is complex and the identification of marine stakeholders, let alone the legitimacy of their claims to representation, is challenging. This is particularly so given that 'the public' are included in this list of marine stakeholders, and this requires detailed discussion of publics more generally and their role in giving meaning and value to space and place. The important point here is to identify who this 'public' includes – how far reaching does the term 'public' extend? This Chapter has identified marine planning stakeholders based on academic literature related to English MSP policy. Separating the '*who* to include' with '*how* to include' has been necessary due to the lack of literature regarding the consultation process for marine licensing.

3.9. Navigating Decision-Making and Complexity in Marine Space

Evidently, the marine environment is complex and so development assessment and regulation within this environment are subject to the physical complexity of this environment which MSP aims to rationalise, marine licensing aims to simplify, and EBA aims to quantify. These processes find foundation in the long history of the human/non-human maritime relationship, in which knowledge and development advances grew synchronously with one informing the other in a feedback loop of increasing knowledge and utility. Epistemological and ethical questions add additional complexity to decision-making in this marine domain and so before making decisions there is a need to take

a step back and consider how the decision-making processes have evolved based on various and conflicting decision-making models which attempt to reach rational conclusions for challenging decision scenarios. Beneath this lies the ethical positions from which both bias and justification of actions stem.

The impact of broadcast media presentations of natural history and environmental imagery was discussed as being highly effective in their public and policy reach, and this had been beneficial to marine conservation. Care is needed here though, and it is worth reiterating the use of narrative within these accessible representations of the non-human ('Natural') world. It is clear that the Anthropocene thesis finds strong support in this medium and also that ecocentric environmental ethics grows with increasing education of non-human processes. The level to which the human/non-human dualism exists within ethical thought depends on the specific Anthropocene narratives being employed, and as suggested in this current Chapter there are challenges here yet to be overcome.

For decision-makers, an understanding of the multiple environmental ethical positions situated within stakeholder communities and publics for a specific development proposal allows for more meaningful engagement with the representations being voiced. Decision-making based on “dominant utilitarian approaches to environmental policy [is] not consistent with the existence of plural and incommensurable values” (O’Neill *et al* 2008, p91).

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Chapter 4. Conceptual Framework and Methodology

4.1. Situating Research Contribution – From Theory to Empirics

The previous chapter highlighted the challenges of identifying, valuing and assessing cultural impacts within strategic EBA governance, and within the immediacy of marine licensing decision-making scenarios. Assumptions regarding the value of, and permitted – or legitimate – use of, space are rooted in individual and group (public-consensus) core beliefs about environmental ethics. Understanding how these ethical beliefs operate spatially, using the literature reviewed in Chapter 2 as a framework, is therefore central to this current research. In other words, how does space gain meaning through social production? Exploring this question initiates the formulation of a response to the 'problem' of combining human value and the sea within assessment in a meaningful way, which is then analysed through the primary research findings presented in Chapter 5 to 8 and discussed in Chapter 9 of this thesis.

This current chapter builds on the literature review by providing the conceptual framework which is used to situate the primary research presented within this thesis. Firstly, a framework is suggested for how the marine licensing processes currently operates and the limitations of this current model are discussed. These limitations concern how marine space is conceptualised within MSP policy and marine licensing processes operating within the English context. An alternative framework is then proposed. Within this alternative framework the relationship between EBA and the Production of Space is reframed and is justified with recourse to the public space theoretical literature.

This chapter then sets out the research strategy and methods. In these sections the adopted case study approach is justified and the main Goodwin Sands case study introduced. Data collection is discussed and the thematic approach to data analysis, first introduced in Chapter 1, is expanded. The conceptual relationship between the conceptual framework and the research methods are then discussed. The chapter closes with an overview of the limitations of this research along with ethical considerations for data collection and analysis. Mitigations strategies employed to overcome these limitations and ethical considerations are also discussed.

4.2. Conceptual Framework

The uniquely fluid physicality of marine space (Bremner 2013; Steinberg 2013; Jay 2018), has led to an epistemic divide between terrestrial and marine spatial understanding, and to a separate consenting regime for development projects proposed at sea (Walsh & Kannen 2019; Ehler 2008; Kidd & Shaw 2013; Gazzola *et al* 2015). MSP based on EBA has introduced an alternative regulatory approach to previous sector-based consenting frameworks based on environmental permitting systems (HM Government 2009; 2011b; Douvere 2008; Gilliland & Laffoley 2008; Douvere & Ehler 2009; Smith *et al* 2012; Potts *et al* 2012; Ritchie & Ellis 2010). MSP introduces a holistic approach to the assessment of impacts, with a focus on spatial, rather than sectoral, governance. EBA conceives of the marine environment as a source of goods and services necessary to satisfy human needs. This anthropocentric position maintains the rhetoric of sustainable development and the intrinsic value of the non-human environment (Sagoff 2010; Probyn 2016). Enhanced public consultation is also a key aspect of the MSP approach (Richie 2014). Multiple ethical positions exist within marine stakeholders and these must be understood before applying ethical value judgements to the non-human environment (Gagnon-Thompson & Barton 1994, p149; Bjerke & Kaltenborn 1999; Brown *et al* 2002; Karpiak & Baril 2008).

Debates regarding the value of the non-human environment risk maintaining a binary distinction between human and non-human worlds. Consideration of Anthropocene narratives are helpful to understand the category error which occurs in use of this human/non-human binary (Waters *et al* 2014; Davies 2016). Marine cultural heritage and maritime history evidence show knowledge of the seas has developed in tandem with their anthropological usage. Humans learnt about the marine environment through their encounters with it, and knowledge grew as use developed (Smith & Potts 2005; O'Neill *et al* 2008).

Marine licensing decision-making, as part of wider Marine Planning policy implementation, is undertaken based on consultation with stakeholders and the public and through consideration of the assessment of impacts undertaken within EIA and other related evidence-based models. These assessments are based on EBA, and evidence from the literature has presented their limitations (Turner & Essex 2016; Chi

et al 2016). It is acknowledged in this thesis that development decisions need to be made, and that a pragmatic approach to the assessment of potential impact is needed to avoid overly resource- and time-intensive determination processes. However, the indications from the literature of EIA professionals and decision-makers assuming deviance within negative public representations towards proposed developments (Waldo 2012; Aikin 2010), leads to the need to investigate the epistemological foundations of the decision-making process. An understanding of the symbolic logics of opposition is useful here (McLachlan 2009). This includes understanding the multiple values of 'place' which exist within a specific space.

For this thesis, space is understood to be a social space comprised of three moments – perceived, conceived and lived – which are in a constant state of (re)production (Lefebvre 1991). This is a fundamentally anthropocentric and humanistic Marxist position, which preserves a critique of the fundamental reductionism of structuralist theories whist maintaining a materialist ontology (Wilson 2011; Merrifield 2000). This position critiques the current marine licensing decision-making approach on the grounds of its uncritical application of EIA and EBA processes. Marine licensing attempts to make transparent and accountable decisions by, necessarily, simplifying social space to its representations (conceived space). This distances the practice of marine licensing from the representational space of lived experience, as illustrated in Figure 4.1.

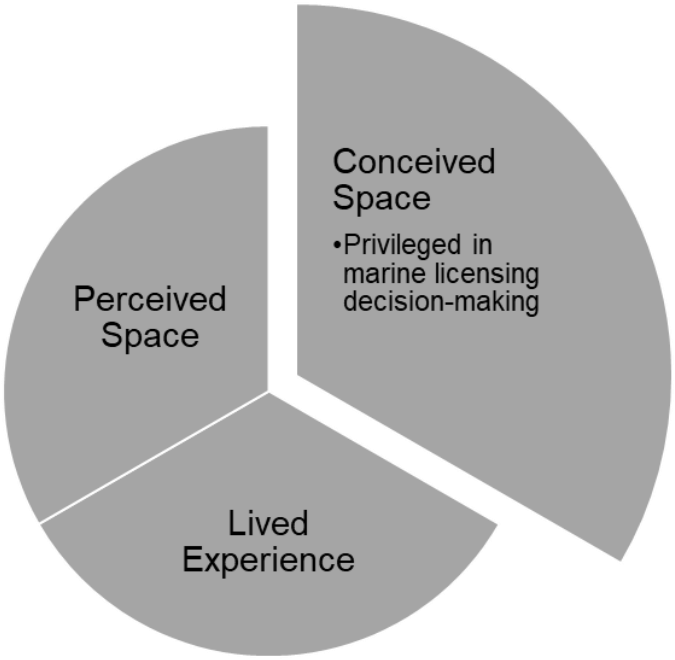

Figure 4.1 Conceptual Understanding of the Spatial Focus of Marine Licensing

Theoretically, there is good reason for this use of simplification. Maps and Charts simplify complexity in order to provide clarity. However their primacy within decision-making demonstrates a system error. Unless representational space itself – the spatial moment of lived experience - is given appropriate value within decision-making, and unless the production of space is understood as the ontological foundation for social space, transparency of decision-making is limited and in turn this significantly impacts the publicness of the process and the space for which development is being consented. The assumption that objectors to planning applications are deviant (Waldo 2012) is evidence of a need to reframe marine licensing decision-making.

This thesis proposes an alternative conceptualisation. Governance theories, EBA, MSP and Marine Planning policy operate as representations of space – conceived – *within* social space, as depicted in Figure 4.2.

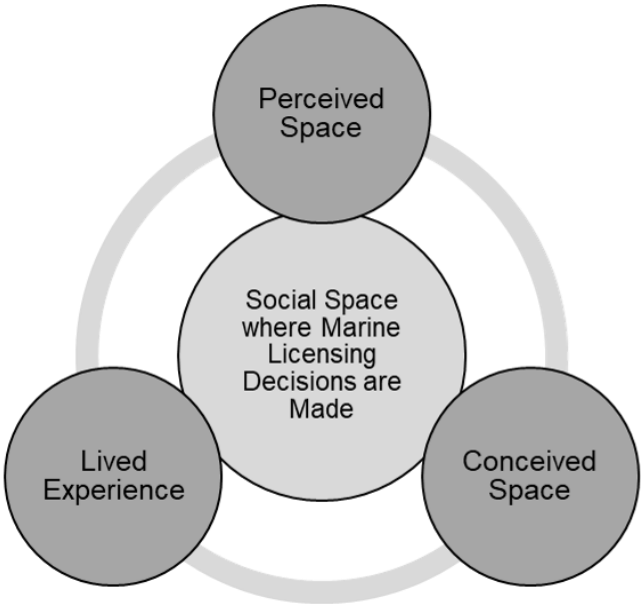

Figure 4.2 Marine Licensing Decision-Making – Location in Social Space

Marine Licensing therefore operates as a direct (co)producer of social space. Perceived space is (re)produced – impacted/changed – by decisions made based on the spatial representations produced within wider marine governance frameworks. Lived experience is also changed. But, similarly, spatial representations are themselves transformed by physical change in the spatial practice of perceived space. Charts are updated when development occurs. Lived experience transforms how representations are made. A lived experience of a place impacts how it is conceived. Limiting engagement of lived experience, and defining as deviant some stakeholder representations, ideologically mediates space, thus detracting from its publicness.

Within this conceptual framework the *place* in which a marine development is proposed is understood as a *social space* (Holgerson 2015). The outcome of a marine licence determination, therefore, *impacts on* and *is a productive force* within this social space. Understanding the decision-making situation in this way allows for exploration of the publicness of the decision-making process itself. If access to social space is restricted by disparate consideration of, or indeed omission of, particular representations of space within impact assessment and decision-making, then the publicness of marine space is limited.

This conceptual framework has been used within this research to frame the theoretical discussions, the lens through which the empirical work has been undertaken, and also

used to explore the data collected from the multiple sources outlined in Section 4.4. This is outlined following introduction of data collection and data analysis methods and presented in Section 4.6.

4.3. Methodology

The conceptual framework above has been used to create a methodology which explores the impacts of marine development on the publicness of the sea, with a focus on the process with which marine development projects are consented. The research methodology applied to this thesis explores the process of marine licence decision-making and is based on the observations gained from the literature review that marine licensing decision-making is epistemologically distant from the social space thesis and therefore the lived experience of marine space co-producers – marine publics – is afforded limited attention within impact assessments and decision-making undertaken for marine development projects. Furthermore, the privileging of some representations of marine space over others, often assumed as deviant due to their opposition to development, is evidence of ideological mediation at play within the production of marine space within marine licensing decision-making.

The two main research questions through which the literature has been explored offer a structure which has been used to present empirical research in relation to the assessment and consenting of marine development projects and their wider governance framework and to the space in which marine licensing decisions take place. As presented in Chapter 1, these research questions are:

> RQ1. What is ‘the publicness’ of the sea?
>
> RQ2. How public are the marine development governance frameworks and decision-making processes?

The overarching research question is: **What is the relationship between the publicness of the sea and the process through which marine development is assessed and consented within the English marine licensing process?**

The remainder of this chapter outlines the overarching approach to the research methodology before detailing how the empirical research was undertaken. The use of

a qualitative case study approach is justified and the case study selection process explained. Data collection techniques are presented and the data analysis framework is explored along with research ethical considerations and the limitations of this approach.

4.3.1. Overarching Research Approach

The research questions have been used to interrogate the current body of academic literature and to situate the contribution which this research makes. Building on this structure,

As introduced in Chapter 1, and made evident from the literature review presented in Chapter 3, RQ2 (How public are the marine development governance frameworks and decision-making processes?) is a complex and multifaceted question. As such, the response to this question, presented in the proceeding analysis and findings chapters, required a greater amount of primary research than RQ1 (What is the Publicness of the sea?). Indeed, the response to RQ2 is necessary in order to address RQ1. Therefore, the primary research sought to first address questions regarding the publicness of the marine development governance frameworks and decision-making processes *in order to* then address the publicness of the sea.

To formulate a response to RQ2 it was necessary to sub-divide the question to allow for the question to be explored systematically. This resulted in the following sub-questions to RQ2 being utilised:

> RQ2.1. How public are the marine governance institutions and legal and political frameworks within which marine licensing operates?
>
> RQ2.2a. What is the marine development decision-making process?
>
> RQ2.2b. How public is the marine development decision-making process?

Note here that RQ2.2 has been further sub-divided to allow for the decision-making process to be defined before it is critiqued in relation to its publicness.

Figure 4.3, overleaf, illustrates the approach taken towards the primary research undertaken for this thesis.

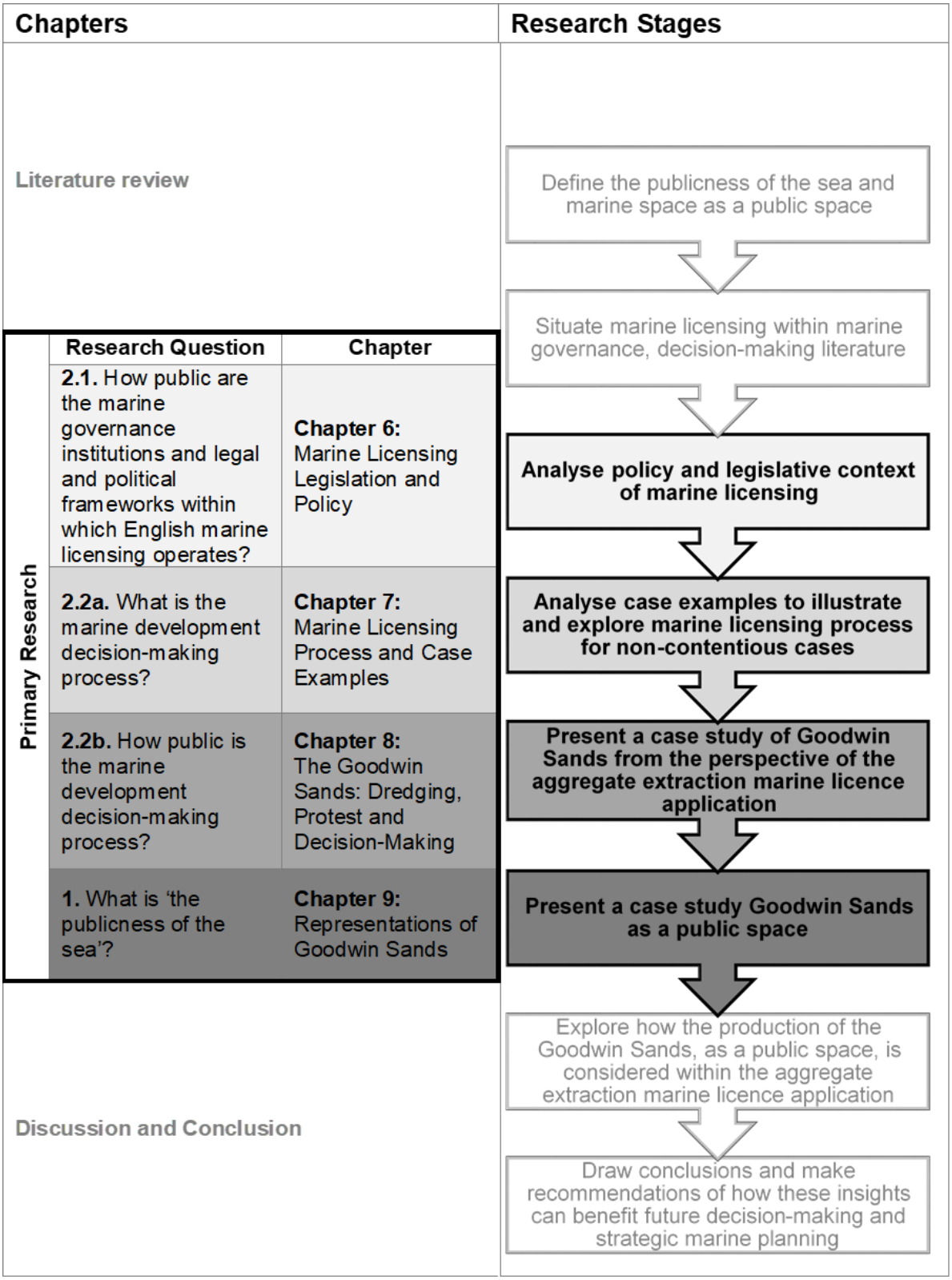

Figure 4.3 Primary Research Approach to Research Questions

This thesis takes a qualitative case study approach to gain insight into the regulatory process and its treatment of publicness related issues. This methodology represents an underlying research epistemology in which the aim of research is to "understanding people and events not as phenomena comprising disparate disconnected parts but rather as phenomena with interconnected elements interplaying in a kind of social ecology" (Thomas & Myers 2015, p18). Understanding this interconnectedness of individual actors within marine development regulatory processes is crucial for understanding how regulators manage publicness within decision-making frameworks.

Case studies allow for in-depth research into particular projects within 'real life' contexts (Thomas & Myers 2015, p5). This approach is deemed highly relevant to the research themes considered in this thesis as case studies try to "illuminate a *decision* or set of decisions: why they were taken, how they were implemented, and with what result" (Yin 2014, p15, emphasis in original). The case study for this research needed to be an example of a marine development project which attracted strong public interest and one in which social or cultural potential impacts could be identified. The selected Goodwin Sands case study can therefore be said to have research significance based on the criteria that exemplary case studies are those which are of general public interest, national importance (theoretically or practically), or a combination of the two (Yin 2014, p201). Case studies should also be both informative and representative in order for the research findings to be deemed valid and hold claims of generalisability (Swanborn 2010, p52).

The main Goodwin Sands case study includes *both* a physical place *and* a contentious marine licence application for aggregate extraction. The Goodwin Sands as *place* enables this research to explore the publicness of marine space. The Goodwin Sands as *licence application* enables this research to explore the publicness of the marine licensing decision-making process and governance framework. The case study provides the main focus of this research and is supported and contextualised through analysis of relevant legislation and policy, additional quantitative analysis of marine licensing data, and through case example analysis of non-contentious marine licence applications. This approach allows the Goodwin Sands case study findings to be validated, and by contrasting the main case study with the marine consenting process for the smaller case examples, claims of representativeness and generalisability can be made. The data collection and analysis methods used in the four primary research

stages set out in Figure 4.3 are explained in Section 4.4 and Section 4.5. Justification for selection of the main Goodwin Sands case study is discussed below.

4.3.2. Main Goodwin Sands Case Study Selection and Justification

Purposive sampling was used to select the primary case study for this research. A single in-depth case study, with additional case examples acting as a comparison, was selected to allow the details of the case to be explored. Case study selection commenced with the marine licence application rather than physical space. This ensured that a relevant application existed with the marine space under investigation.

The Marine Management Organisation (MMO) maintain a public register of all marine licence applications (MMO 2019). In addition to this statutory requirement (HM Government 2009, p68), the MMO self-select high-profile 'selected cases' to display more prominently on their website (MMO 2019a). Several potential case studies were identified from this source. At the time of case study selection in December 2017 the Goodwin Sands aggregate extraction application was still in the process of being determined and no consent decision had been reached. This case has attracted an ongoing public interest campaign in relation to potential disturbance to WW2 war graves, ecological impacts, and social and community impacts. The proposed project, if consented, would comprise the dredging of sands and gravels for use in the expansion of the Port of Dover.

Selecting a case study application which had not yet been determined presented risks and advantages. There was a risk that the application would not be determined during the research period, or that the application would be withdrawn. This would have resulted in no analysis of consent decision-making, however it would have led to findings regarding the *process.* The main advantage of selecting a 'live' case study was that, in the absence of a consent decision, documents reviewed as part of the analyse were reviewed without risk of bias which could have been present if the outcome of determination was known.

4.4. Data Collection

Data collection was undertaken in five stages which aligned with the research approach outlined above. As illustrated in Figure 4.4 these stages progressed in a linear fashion, however later stages identified additional documentation which resulted in revisiting earlier stages to ensure that all stages complemented each other.

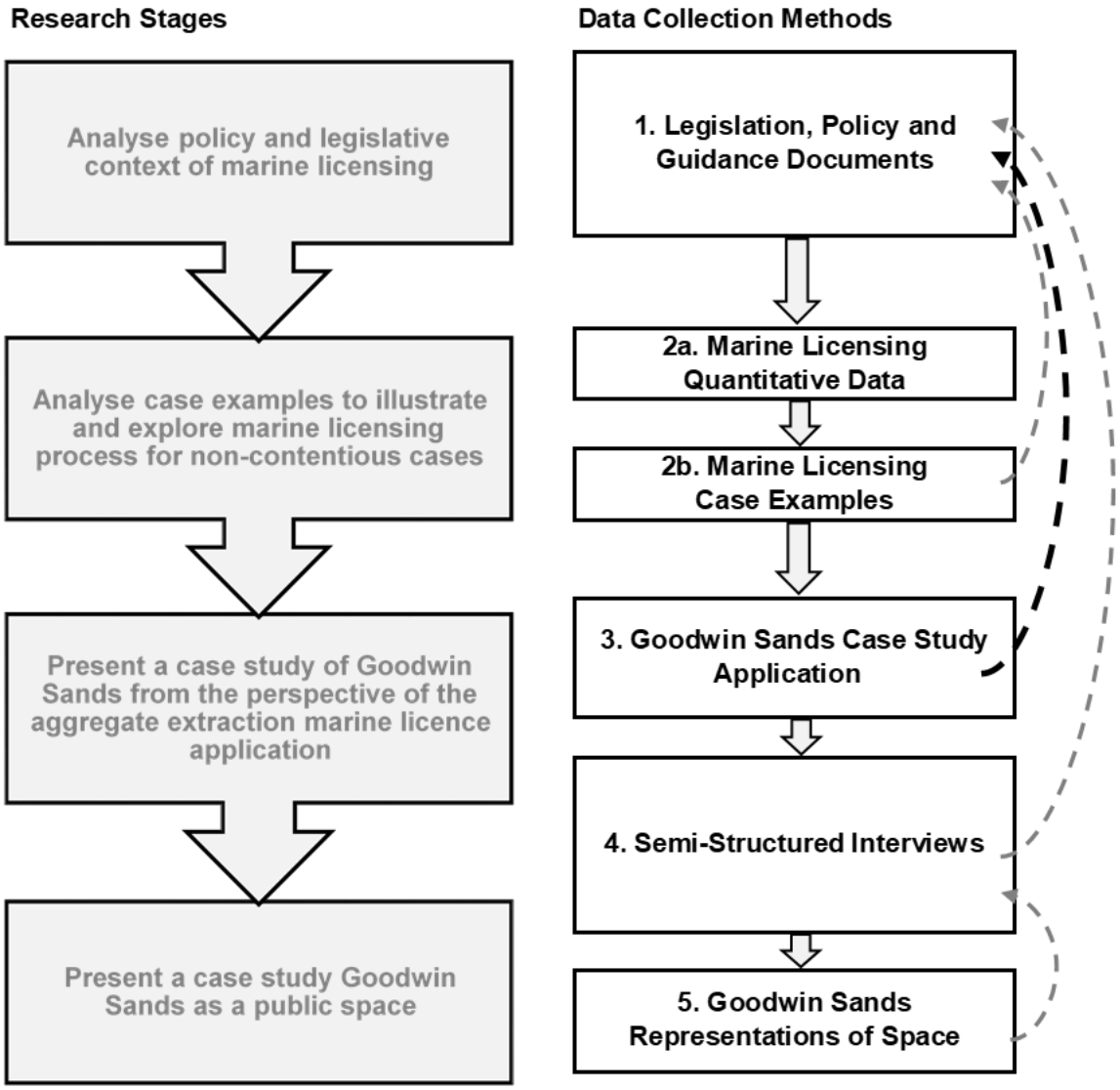

Figure 4.4 Data Collection Methods

4.4.1. Legislation, Policy and Guidance

Data collection stage one involved identifying and collecting legislative, policy and guidance documents relevant to the main case study. At the commencement of this stage, data collection was based on generic marine licensing requirements and specific aggregates policy and guidance. This was reviewed, and additional documentation included, following engagement with the remaining stages of the research, particularly following the Goodwin Sands case study marine application and the interview data collection.

Starting with primary legislation (MCAA2009), the data collection strategy involved interrogating HM Government's online archive of policy and legislative development documents. The purpose of reviewing these documents was to explore the research theme of the publicness of marine governance, and to provide an answer to the sub-research question (RQ2.1) '*How public are the marine governance institutions and legal and political frameworks within which English marine licensing operates*?'.

In total, 37 documents were identified for review with all documents located within the public domain. This was important in order to assess the representations of marine space found in these publicly accessible documents. Details of the documents included in this stage are provided in Appendix 4A.

In addition to these documents, the publicly accessible marine licence application determination guidance located on the MMO's website was collected for analysis in an attempt to understand the consenting process. This was an important preliminary step for the next stage of analysis for two main reasons. Firstly, this provided findings on publicness in terms of accessibility and transparency of the marine licensing decision-making process, and contribute to a response to sub-research question (RQ2.2a) 'W*hat is the marine development decision-making process?*' Secondly, this overview allowed analysis which provided framing for the qualitative marine licence application case example data described below.

4.4.2. Marine Licence Application Data and Case Examples

The second stage of data collection was sub-divided reflecting the type of data collected and subsequently analysed. Both of these sub-stages relate to the theme of the publicness of marine licensing decision-making and to the sub-research questions

(RQ2.2a) '*What is the marine development decision-making process?*', and (RQ2.2b) '*How public is the marine development decision-making process?*'.

Stage 2a. Quantitative Marine Licence Application Data

Stage 2a involved obtaining quantitative data for all marine licence applications processed by the MMO since its vesting in 2010. The data was located within Defra's Spatial Data Catalogue (Defra 2019) which populates the marine planning ARCGIS Marine Information System (Gov.uk 2019). The marine licence application data was contained within three GIS shapefiles depending on the type of coordinates related to individual licence applications: a point, line or polygon. All three shapefiles were downloaded and opened within ARCGIS. The data attribute tables were then exported to MS Excel and used to create one table containing all 2927 marine licence applications contained within the GIS files. The data within the ARCGIS attribute tables presented each marine licence *activity* as a separate entry with each marine *licence* application containing, on average, more than one activity. The fields used within the marine licence data table are displayed in Appendix 4B.

Stage 2b – Marine Licence Application Case Examples

The majority of marine licence applications attract little if any public interest or objection. As all marine licences are determined using the same process the main Goodwin Sands case study *should* be representative of wider marine licensing decision-making. To assess this claim a representative sample of other marine licence applications was required for further analysis. Reviewing these case examples provides a basis to analyse the main Goodwin Sands case study marine licence application but ascertaining the 'standard' marine licence decision-making process.

Case examples were selected based on the application fee bands. The quantitative data contained the estimated project cost of each application. As the project cost referred to the application as a whole, rather than each activity, it provides a more representative analysis of the application as a whole with more expensive project generally being more complex and thus more likely to involve greater potential impact on the marine environment and other uses of the sea. As the findings presented in Chapter 6 show, selecting a representative sample of licence applications based on activity type would be impossible due to the multiple activities attached to individual

applications and the subjectivity and research intensity required to attribute a 'main' activity to each application.

To create the sample, the data from 2015-2017 (three years) was manipulated so that each application was displayed as a single entry. The project cost was then used to attribute fee bands to each application in line with the information provided by the MMO. The three-year data set was reviewed and a proportionate number of examples found as shown in Figure 4.5.

Year	Marine Licence Applications per Fee Band							Total
	1	2a	2b	2c	2d	2e	3	
2015	124	11	38	39	49	75	84	420
2016	131	25	36	24	73	79	70	438
2017	174	14	38	22	52	70	69	439
Total	**429**	**50**	**112**	**85**	**174**	**224**	**223**	1297
%	33%	4%	9%	7%	13%	17%	17%	100%
Representative sample	**8**	**1**	**2**	**2**	**3**	**4**	**4**	**24**

Figure 4.5 Marine Licence Application Case Example Representative Sampling Based on Fee Bands

Case examples were selected within each fee band category using a random number generator to select the specified number of cases to research further. The resultant 24 cases are presented in Figure 4.6.

Ref	Application Number* / Title**	Activities***
Fee Band 1		
1.BAS	MLA/2017/00228 burial at sea - Mr Patrick Hatchard	Burial at sea
1.BB	MLA/2016/00077/5 Component exchanges (maintenance) at Burbo Bank offshore wind farm	Maintenance of existing works
1.BL	MLA/2017/00503 Bognor Regis - Barrack Lane	Maintenance of existing works
1.IW	MLA/2015/00315/1 Imperial Wharf	Maintenance of existing works
1.LF	MLA/2016/00249 Lost Frontiers - DNA of North Sea	Sampling x 2
1.OP	MLA/2015/00448 Marine Growth Removal at Ormonde Pontoon, Ramsden Dock	Other removals
1.WID	MLA/2015/00241 Emergency Dredging Application at West India Dock	Navigational dredging
1.WR	MLA/2016/00237/1 Wandle River Wall SI Works	Other works
Fee Band 2a		
2.AQ	MLA/2017/00027 Appledore Quay signs and new mooring anchors	Construction of new works
Fee Band 2b		
2.HW	MLA/2017/00018 Hamford Water, Walton-on-the-Naze | Surface Water Outfall Headwall	Construction of new works
2.RDT	MLA/2015/00172/1 Release of Rhodamine Dye Tracer	Use of tracers
Fee Band 2c		
2.CQP	MLA/2015/00263 Repairs to damaged/corroded quayside piles	Maintenance of existing works
2.KPS	MLA/2017/00312 Keadby Power Station Intake & Outfall Dredging	Clean-up dredging
2.PBA	MLA/2015/00282/2 Pontoon for boat access, Wivenhoe, Colne Estuary	Construction of new works
Fee Band 2d		
2.CWN	MLA/2015/00318 cargo off wk neppo	Wrecks and other archaeological remains
2.QM	MLA/2017/00130 Quayside Marina Hoist Dock	Construction of new works
Fee Band 2e		
2.BH	MLA/2015/00044/1 Bembridge Harbour Maintenance Dredging	Navigational dredging x2 Disposal of dredged material
2.BSD	MLA/2017/00095/1 Bedhampton Silt Disposal	Disposal of dredged material
2.GG	MLA/2016/00127 Greater Gabbard Offshore Wind Farm Met Mast IGMMX Removal of lattice	Other works
2.RPW	MLA/2017/00118/1 Rooswijk Protected Wreck Site, Archaeological Excavation and Preservation	Wrecks and other archaeological remains
Fee Band 3		
3.ASP	MLA/2015/00433/1 ABLE SEATON PORT QUAY 6 COFFERDAM REMOVAL	Decommissioning of works
3.GuS	MLA/2016/00168/2 Gunfleet Sands 3 Offshore Wind Farm O&M Marine Licence	Other removals Maintenance of existing works x5
3.SF	MLA/2017/00125/1 Shell Flat Met Masts Decommissioning Project	Decommissioning of works x2
3.SSP	MLA/2017/00330 Managed Breach of Shingle Spit at Pagham	Other works x3 Construction of new works Maintenance of existing works

Notes
* Application number includes the year of application
***Title as displayed on application, including spelling and grammar
*** x2 indicates two of the same activity on application

Figure 4.6 Marine Licence Application Case Examples

Once these 24 case examples were identified, all public register documents for each of the marine licence applications was downloaded. During data collection these case examples and their associated application, determination and consent documents were not viewed other than to assign file reference numbers to them and categorise them accordingly. It was important not to review and discount chosen case examples which contained limited or absent information. Finding cases with a 'full' suite of associated assessment and consent documents would have resulted in an inaccurate assessment of the publicness of the marine licensing processes in relation to transparency and access to decision-making data. The full list of documents collated for the case example analysis is included in Appendix 4C. Unique file references have been added to each document to allow for these documents to be referenced within the primary research chapters.

4.4.3. Goodwin Sands Case Study – Marine Licence Application

The third stage of data collection involved downloading all documents associated with the Goodwin Sands aggregate extraction marine licence application which were available within the MMO's marine licensing public register. The data within this stage was used to explore two research questions. Firstly this data was utilised to further respond to sub-research question (RQ2.2b) "*How public is the marine development decision-making process?*" through in-depth case study. Secondly, the Goodwin Sands marine licence application data was used alongside the data collected and analysed within stage 4 (Interviews) and stage 5 (Representations of the Goodwin Sands) to provide a response to research question (RQ1) "*What is 'the publicness of the sea?*".

As stated in Section 4.3.2, at the commencement of this stage the marine licence had not been consented and therefore not all application, assessment and determination documents were present within the public register entry. Engagement with a protest group objecting to the application proved a valuable source of information regarding the publication of additional assessment documentation and the eventual publication of consent decision and granted marine licence. The documents collated for analysis within this stage are listed in Appendix 4D and have been assigned unique file reference numbers for use within the primary research chapters.

For this stage of data collection and analysis, it was important to limit the documentary evidence reviewed to that which was publicly available within the MMO's public register. This allowed for analyse of the case study marine licence *as represented* by these documents, namely from the perspective of the applicant and the regulator. This is discussed as part of the case study analysis findings presented in Chapter 7.

4.4.4. Interviews

The first three data collection stages involved the use of data already available, although not necessarily easily *accessible*, within the public domain. With particular reference to stages 2b and 3, the data collected for analysis had been made publicly available by the marine regulator for the associated marine licence applications and as such presented representations of the sea limited to this scope. In other words, the representations of those objecting to development were limited to the 'regulators view'.

Qualitative interviews provided an opportunity to discuss aspects of both the Goodwin Sands marine licence application and the Goodwin Sands as a *place* or *social space* with a sample of marine stakeholders related directly, indirectly or unrelated to the marine licence application. Interviews allowed for an in-depth exploration of the values and issues deemed important to different communities and organisations involved in the development consent process. Interview data was therefore used to explore the overarching research question and all sub-research questions. The full interview participant sample is presented in Figure 4.7.

Reference	Interviewee Description
DR:DEV1	Marine Licence Applicant Representative
DR:DEV2	Marine Licence Applicant Representative
DR:DEV3	Marine Licence Applicant Representative
DR:NSA1	Marine Licence Opposition - Heritage Local Expert
DR:NSA2	Marine Licence Opposition - Town Councillor
DR:PG1	Marine Licence Protest Group Founding Member
DR:PG2	Marine Licence Protest Group Founding Member
DR:PG3	Marine Licence Protest Group Supporter
DR:PG4	Marine Licence Protest Group Supporter
DR:REG1	MMO Case Manager
DR:RT1	Goodwin Sands Tour Operator
DR:SA1	Local Conservation Charity Marine Officer
DR:SA2	National Marine Heritage Public Body Head of Marine Policy
IR:CB1	Local Conservation Public Body Public Event Coordinator
IR:CB2	National Conservation Charity Volunteer Coordinator
IR:CB3	Local Conservation Charity Marine Officer
IR:MS1	National Maritime Safety Charity Volunteer
IR:MS2	National Maritime Safety Charity Station Manager
IR:MU1	Public education event volunteer
IR:MU2	Public education event volunteer
IR:MU3	Public education event volunteer
IR:MU4	Goodwin Sands Recreational User (past use)
NR:MU1	Recreational Yachtsman 1
NR:MU2	Recreational Yachtsman 2
NR:MU3	Recreational Yachtsman 3
NR:MU5	Goodwin Sands Recreational User (present use)
NR:MU6	Goodwin Sands Recreational User (present use)
NR:MU7	Goodwin Sands Recreational User (present use)
NR:RT1	Local Authority Tourism Manager
NR:RT10	Channel Swimmer Public House Landlord
NR:RT2	Local Historian/Museum Curator - Maritime Heritage
NR:RT3	Goodwin Sands Public Event Organiser
NR:RT4	Public coastal walking festival organiser
NR:RT5	Public coastal walking festival participant
NR:RT6	Public coastal walking festival participant
NR:RT7	Public coastal walking festival participant
NR:RT8	Local Historian/Storyteller Public Event Organiser
NR:RT9	Public coastal walking festival participant

Key:
Relation to Case Study Marine Licence:
DR = Directly Related; **IR** = Indirectly Related; **NR** = No Relation
Sector/Body:
CB = Conservation Body; **DEV**= Developer; **MU** = Marine User; **MS** = Maritime Safety;
NSA = Non Statutory Advisor; **PG** = Protest Group; **RT**= Recreation and Tourism; **SA** = Statutory Advisor

Figure 4.7 Interview Participants

The interview participant selection process started with the Goodwin Sands marine licence application documents. From reviewing these in stage 3, it became clear who was objecting to the licence application and these stakeholders were then selected as highly significant to this research. This group of stakeholders were directly related to the marine licence application and included the Goodwin Sands SoS protest group, local wildlife and heritage charities and national heritage statutory advisors.

The MMO as regulator was included in this group of stakeholders, however due to "operational requirements" precluding the discussion of live cases the MMO was unwilling to take part in this research and refused interview requests. Negotiation with the MMO regarding discussing the marine licensing process itself, without reference to the main case study or indeed any application, proved unsuccessful with the final response being that because this thesis "is not associated with an MMO evidence request […] the time and support [the MMO] can give you is in line with any other request for information from any other member of the public" (MMO Email 29 March 2018). Discussing internal processes and the 'desk instructions' used to determine marine licences "could potentially be used against the MMO in a legal challenge" (MMO email 11 October 2018). These responses present their own findings regarding the publicness of the marine licence application process and are discussed in Chapter 9. Additional methodological challenges related to MMO engagement are discussed in Section 5.6.2.

After extensive negotiation, an interview was arranged in the latter stages of this research once all other data analysis has been completed. This negotiation included a requirement of total anonymity, which has been respected throughout this thesis, and has involved the omission of responses through which this interviewee could be identified by other MMO personnel, past or present. Researcher positionality, discussed in Section 4.7.2 was also utilised here. Again, this request presents its own findings on the publicness of the marine licensing process and is discussed in Chapter 9. Interview data regarding the marine licensing process is included within the analysis of case examples presented in Chapter 6.

Interview participants indirectly related to the marine licence included organisations local to the Goodwin Sands marine area in and around Dover, East Kent. Participants within this group had some connection to the Goodwin Sands application but were not

heavily involved, or vocal, within the application process. Examples here include wildlife charity volunteers, recreational users of the Goodwin Sands area and navigational safety bodies. These participants were identified through snowball sampling from the directly related organisations.

The final group of interview participants had no relation to the marine licence but were located within the case study are of East Kent and had some relationship with the Goodwin Sands. Examples here included recreational users visiting the Goodwin Sands on public tours, local historians, and local authority tourism managers. These participants were identified through the same process as the indirectly related participants or through opportunity sampling whereby participants were approached during recreational activities. This provided valuable insight into the use and public perception of the Goodwin Sands. Limitations of this approach are discussed at the end of this chapter.

Interviews were arranged either by email, phone or in person. All but one was carried out face to face. In line with social science interviewing best-practice, interviews were audio-recorded and the subsequent recording transcribed (Harvey 2011, p436; Mikecz 2012; Christmann 2009). During transcription, oral language was translated into written language and nuances, pauses and tone within responses noted (Kvale 1996, p165; Mikecz 2012). In total the interviews resulted in over 16 hours of recorded data.

A semi-structured approach to interviewing was used to first gain rapport and to provide participants with free space to expand on their thoughts and feelings towards the Goodwin Sands and/or the licence application process. The interviews allowed the researcher to gain valuable qualitative data which offered the possibility to “achieve a level of depth and complexity that is not available to other, particularly survey-based, approaches” (Byrne 2006, p182; Rubin & Rubin 1995; Hollway & Jerrson 2000). They provided a flexible approach to data generation in which “the basic subject matter is no longer objective data to be quantified, but meaningful relations to be interpreted.” (Kvale 1996, p11). The metaphor of the interviewer as a *traveller* proved insightful during this research. By undertaking qualitative interviews, a journey was taken with participants which lead to “a tale to be told upon returning home” (Ibid, p3). This narrative approach (Kvale 1996, p5; Hollway & Jerrson 2000, p30) sees the interviewee/interviewer relationship as one in which data is co-produced, and the

interviewee is thus a partner within the research rather than a subject being studied (Rubin & Rubin 1995, p10; Byrne 2006; Neal & McLaughlin 2009).

The majority of interview participants had detailed knowledge of at least one aspect of the Goodwin Sands, or the surrounding marine space, and many could be considered as experts within their respective fields. This includes non-statutory marine licence stakeholders such as local heritage amateur experts and the protest group representatives. Treating all participants as experts was important for this research because public representation of marine space (both in terms of social space production *and* marine licence consultation responses) rest on deeply held beliefs about the meaning and value of the sea. As such, the interview method adopted was based on that used within 'expert interviews'. This style of interviewing originates within the study of policy-making and politics (Darbi & Hall 2014, p832) and is closely related to 'elite interview' in which elites as "those who occupy senior management and Board level positions within organizations" (Harvey 2011, p433). Whilst this elite title could be applied only to a minority of interviewees, the 'expert' title – defined as "anyone who is responsible for and has privileged access to the knowledge of specific groups of people or decision-making processes" (Littig 2009, p100) – applied to the majority. Experts are also defined as "those with superior talents in any field" (Goldman & Swayze 2012, p231) whilst elite can refer to the ability to "agenda set" (Neal & McLaughlin 2009, p703).

4.4.5. Goodwin Sands Case Study – Representations of Marine Space

To form a more concrete understanding of the Goodwin Sands as a social space, additional representations of space in addition to those presented within marine licence application documents (stage 3) or interview (stage 4) were sought. Data within this final stage came from a variety of sources including local archives and museums (both written and visual), tourism information documents, media and social media reports and images, and myths and stories recounted by local East Kent storytellers and historians. Photographs and videos were also made during field work. The resultant data set therefore included a variety of visual, oral and written representations of the Goodwin Sands. These were used to provide a response to research question (RQ1) "*What is 'the publicness of the sea?*"

4.5. Data Analysis

The data collected within the five stages described above was analysed using an overarching thematic approach, based on the sub-research questions, which limited its geographical focus to the Goodwin Sands. This ensured that each individual data set was analysed in such a way that findings contributed to the overall research question with geographical focus limited to the Goodwin Sands locality. As indicated above some data sets were utilised within multiple research questions. As justified in Section 4.3, data analysis was undertaken so that RQ2 was explored first in order for RQ1 to build on these findings.

4.5.1. (RQ2.1) How public are the marine governance institutions and legal and political frameworks within which English marine licensing operates?

The data analysed to respond to this sub-research question relates to the policy and legislative context of marine licensing. As such this theme utilised data collected in stages 1, and 2a of the data collection methods described above. Both data sets was subject to separate analysis methods which are outlined below and expanded within the presentation of findings in Chapter 5 (Marine Licensing Legislation and Policy).

Legislation, Policy and Guidance Document Analysis

The legislation, policy and guidance documents collected at stage 1 were reviewed to identify key words and phrases related to their stated purpose (if present), and the values of the sea expressed. Further to this, evidence of the intended purpose of the marine licensing system was identified. Utilising the language of sustainable development and EBA, the documents were reviewed using NVivo software and the key words used to identify emergent themes within the suite of documents, including changes in policy direction as the legislative drafting process developed. The aim of this analyses was to identify the treatment of public concerns and impacts on social and cultural marine features as set out in the legislation, policy and guidance documents and further to ascertain the clarity of language used within the legislative and policy framework. Where possible, the intended audience of each document was also identified.

Consideration of any rhetorical devises used within these documents was also noted, as these can provide persuasive arguments for the existence of legislative and policy

tools. Rhetorical analysis here focused on the ethos and pathos presented within the documents, in which the credibility of the speaker and the creation of 'mood music' for the necessity of certain policies are used to present a strong argument to the audience (Ritchie 2014, p668). Rhetorical analysis considers the rhetoric used within policy documents to convince the audience of the need for the policy (Throgmorton 1991) and has been undertaken by Barry *et al* (2008) and Ritchie (2014) within the MSP discipline. Following the same principles as the analysis previously undertaken will focus "not so much [on] *looking* for answers to specific problems…, as l*ooking* at the way both the problem, and the possible solutions, are constructed" (Tonkiss, p376 emphasis in original). Overall, the legislative and policy document analysis aims to ascertain *why* this regulatory framework was deemed necessary and the public accessibility of the process through which this framework became enacted into UK legislation.

Marine Licensing Quantitative Analysis

The quantitative data collected in stage 2a was analysed using MS Excel to identify trends regarding the number of marine licence applications submitted and consented and the nature of the marine developments being proposed. The purpose of this analysis, when combined with the policy analysis described above, is to define the extent of the marine licensing process by providing details of the types of projects consented within this framework.

4.5.2. (RQ2.2a) What is the marine development decision-making process?

The data analysed to respond to this sub-research question relates to the marine licensing itself. As such this theme utilised data collected in stages 2a and 2b of the data collection methods described above. Both the quantitative marine licensing data and case examples were used to explore the process through which marine licence decisions are made. This analysis was undertaken alongside the analysis for RQ2.2b, which considers 'how public' the marine development decision-making process is. The analysis and findings related to this research question are presented in Chapter 6.

Marine Licensing Quantitative Analysis

Building on the stage 2a data anaylsis undertaken for RQ1, the quantitative marine licensing data was utilised within this sub-research question to provide a framework

through which to analyse the case examples. This contextualised the case examples in relation to determination stages and decision-making time.

Marine Licensing Case Example Analysis

The case example application documents were analysed using NVivo software in an attempt to identify the process through which each application was consented. This involved reviewing each case example document suite to ascertain the process through which each licensing decision has been made, and whether this information was accessible.

4.5.3. (RQ2.2b) How public is the marine development decision-making process?

The data analysed for this sub-research question relates to the main Goodwin Sands marine licence case study, and is supplemented by the case example data described above. Data collected in stages 2b, 3 and 4 were used to develop this response.

The Goodwin Sands marine licence case study data took primary position within the response to this research question. Justification and details of analyse are provided below expanded within the presentation of findings related to the main case study in Chapter 7. Additional findings for this sub-research question, gained from the case examples, is presented in Chapter 6.

Goodwin Sands Marine Licence Case Study

The importance of considering the application documents in isolation, prior to the addition of interview data, was to explore how accessible and transparent the consent decision-making process was for this development proposal.

The Goodwin Sands marine licence application documents were reviewed in full. This was a lengthy process due to the volume of data, and number of individual public representations included reaching over 3000. The application, assessment, consultation and consent decision documents were analysed using NVivo to identify key words and themes regarding engagement with the public or areas of potential impact over which the public appeared concerned. The tone of the language used within the documents was also noted to assess its public accessibility. Public consultation responses were input into MS Excel in order to identify key themes emerging within this data. These were then compared to the ‘public objections’

presented within later consultation summary reports and consent decision reports originating from the developer or regulator. This allowed for the exploration of the treatment of public concern within the decision-making process and draw conclusions regarding the publicness of this process.

Interviews

Interview data used to respond to this research question explored, and expanded on, insights gained through analysis of the case study application. Transcripts were reviewed to identify key words and phrases and themes emerged from this. Interview data here allowed for increased depth of understanding regarding how the protest group and applicant perceived the marine licensing process and how transparent this process appear from their perspectives.

4.5.4. (RQ1) What is 'the publicness of the sea'?

The data analysed to respond to this research question relates to the Goodwin Sands as a public space. Data analysed here was collected in stages 4 and 5. In addition to these, the documents collected at stage 3 – the Goodwin Sands marine licence application – were utilised to provide additional examples of the conceived space of the Goodwin Sands. Justification and details of analyse are provided below and expanded within the presentation of findings for this theme in Chapter 8.

Goodwin Sands Representations of Space

The assessment documents submitted in support of the application were visually analysed to identify the representations of the Goodwin Sands present within these documents. These included charts and textual descriptions. Representations of the Goodwin Sands were also identified through advisor comments and public representations.

The representations of the Goodwin Sands collected during stage 5 of the data collection process were used to evidence a more concrete understanding of the Goodwin Sands as a social space, produced by the triad of spatial moments. The numerous visual, graphical, oral and textual representations were reviewed and presented alongside one and another to form an understanding of the multiple and often contradictory representations which exist for this social space. Attempts were also made to understand the lived experience of the Goodwin Sands through visiting

– experiencing – the sandbank. However, presenting findings from this field work necessarily collapse into representations of space. Likewise, presenting the perceived space of the Goodwin Sands fatally collapses into representation. This is discussed more fully in Chapter 8.

Interviews

Interview data within this theme was analysed as additional (oral) representations of the Goodwin Sands and is included in the analysis above.

4.5.5. Utilising Public Space Models

Following the analysis for all four research and sub-research questions the findings were used within a thematic discussion which draws together findings and the literature review. This is presented in Chapter 9. As part of this the public space models discussed in Chapter 2 are applied to the Goodwin Sands and the results evidenced with the findings of the primary research.

4.6. Conceptual Framework and Research Data

As introduced in Section 4.2, this research utilises The Production of Space thesis (Lefebvre 1991) as a conceptual framework through which to explore the publicness of the sea and its relationship with marine development decision-making processes. Section 4.2 illustrated how marine licensing appears to privilege the spatial moment of conceived space within its decision-making processes, and this, it is argued throughout this thesis, is an ontological error. Instead, marine licensing operates *within* the spatial triad, both affecting and effected by the co-production of space.

Utilising this conceptual framework to strengthen this spatial theory therefore required data to be collected and analysed *from within* each of the spatial moments to provide a holistic – or *concrete* – understanding of the Goodwin Sands as a social space in which marine licensing occurs. Figure 4.8 illustrates the data collected in relation to each of the spatial moments.

		Perceived Space	Conceived Space	Lived Experience
Policy and Process	Legislation, Policy and Guidance		✓	
	Marine Licence Application Process Data		✓	
Case Examples	Application Data	✓	✓	
	Consultation Data		✓	
Goodwin Sands Marine Licence	Application Data	✓	✓	
	Consultation Data		✓	
Goodwin Sands Fieldwork	Archival Data		✓	✓
	Contemporary Documentary Data		✓	✓
	Photographs	✓		
	Site Visit	✓		✓
	Interviews			✓

Figure 4.8 Data Collected within Spatial Moments

Categorising the data collected for this thesis into the spatial moments is challenging. As all written, or otherwise expressed, accounts of a space necessarily dissolve into a representation of space (conceived space), Figure 4.8 should be taken as a 'best approximation' of schematising the data within the spatial moments. For clarity, this categorisation should be understood as follows:

Perceived space cannot be represented. To do so creates a representation of space (Lefebvre 1991, p33). However, for the sake of this thesis, perceived space is *represented* within the application documents for both case examples and case studies, which provide descriptions of the affected physical marine spaces. Likewise, perceived space is *represented* in photographs made during field work.

Conceived space, as the space of planners (Lefebrve 1991, p38), is unsurprisingly the most represented within the primary data collected for this thesis. These are *representations of space* par excellence, and clearly seen

within case example and case study marine licence application consultation data, namely the *representations* submitted in response to the application. They are also seen in policy documentation, and in archival and contemporary descriptions of marine space, as more-than-physical.

Lived experience again evades representation without dissolving into a representation of space. However, for the sake of this thesis, lived experience derives from, and is presented in, archival and contemporary accounts of interactions with the Goodwin Sands, site visit insights and interview data.

4.7. Ethics, Challenges and Limitations

Methodological limitations and ethical considerations were considered during the design of data collection and analysis processes, and mitigation methods put in place. This section provides details of research ethics and the limitations of the research methodology. Research limitations regarding findings and conclusions are discussed in Chapter 10.

Ethical approval was granted for this research on 8 December 2016 and the study deemed to be 'low risk' in accordance with Newcastle University's research ethics policy (NCL 2019).

4.7.1. Researcher Positionality

The researcher's positionality in relation to this specific research is highly relevant to both ethical and methodological considerations.

Prior to undertaking this doctoral research project, the researcher was employed by the MMO as a Marine Licensing Case Manager. Indeed, it was during this employment that the desire to undertake this specific research was first formed. This positionality allowed the researcher to utilise extensive pre-knowledge of how theoretical MSP decision-making processes are applied in practice. There are also challenges here. This pre-knowledge of the 'workings' of MSP decision-making were often challenged by the research, and the primary data collected could not, ethically, rely on these prior insights. This is discussed within the following sub-sections, and developed further in Chapter 10.

It should be noted that every attempt was made to identify and address pre-existing biases towards both marine stakeholders and marine decision-making processes throughout this research.

4.7.2. Ethical Considerations

The main area for ethical consideration in this research was the inclusion of interviews as a primary research method. These considerations can be grouped into three main categories of 'consent', 'interviewee anonymity', and 'research positionality disclosure' and are considered in turn below. In addition, the ethical considerations related to making fieldwork images and videos is also discussed.

Consent

Interview participants were asked to provide their informed consent prior to the interview as should be obtained, where possible, within any participatory research (Byrne 2006, p185). Informing participants of, not only the overall purpose of the research, but also the risks and benefits related to their participation, was necessary to achieve this consent (Kvale 1996, p112). However, as new knowledge was gained throughout the series of interviews, it was challenging to fully disclose the full research design, especially at the early stages of data generation when limited information has been gathered (Ibid, p113). For interviews arranged by email, participants were provided with an informed consent form prior to the arranged interview. This included preference options for whether participants could be quoted directly within the research findings and whether they agreed to be recorded. Consent was confirmed either in writing or verbally. All interview data was stored securely on Newcastle University servers. The audio recordings were given coded file names and transcripts coded using the same format. Transcripts have been anonymised and audio recordings will be destroyed upon publication of this thesis. While the interview topics were not deemed sensitive the nature of discussions included details of the Goodwin Sands marine licence application process which, at the time of interviews, had not been determined.

Interviewee Anonymity

Anonymity and confidentiality were a significant concern for some interview participants, and crucial for obtaining consent. Research interview participants have

the right to anonymity and confidentiality and this has been respected within the presentation and discussion of research findings (Byrne 2006, p185). This presented challenges due to the small professional network which some participants were part of and to address this all names have been removed from participant data, along with organisation details where necessary.

As introduced above, undertaking an interview with the MMO proved challenging and was only secured following extensive negotiation. A condition of this negotiation was the total anonymity of the individual and this included a request to omit any details which could identify them to serving or former MMO employees including their length of service (DR:REG1). Expanding on reasons for this request for total anonymity, the participant stated that “from what I’ve seen I don’t think [the MMO is] particularly welcoming this review so it kind of opens me up to basically struggling to continue to do my job” (Ibid).

Researcher Positionality Disclosure

The researcher’s positionality as a former MMO employee was relevant to ethical considerations, as gaining access using pre-existing contacts “may pass for unethical conduct in some circumstances” (Darbi & Hall 2014, p842), particularly in relation to the manipulation of power relations (Ibid). It was only through pre-existing contacts that the MMO interview was secured. Positionality has the potential to raise additional ethical concerns. There was a real risk that interview questions could have been construed as ‘leading’ due to the researchers pre-knowledge of the marine licensing decision-making process. This was mitigated through reflection on interview questions and the avoidance of relying on pre-knowledge gained outside of the research process. Disclosure of researcher positionality and former MMO employment was limited, as it was not deemed relevant to the research being undertaken. In some instances, however, this disclosure was necessary to build rapport and trust with participants. This was considered on a case by case basis and any disclosure was caveated with the assertion that ‘insider’ information regarding the marine licensing process would not be shared with participants.

Images and Videos

A final area in which research ethics was a relevant consideration was in making field photographs and videos. Here informed consent could not easily be gained. All

photographs and videos were made in public spaces. Reproduction of these images within this thesis have avoided the inclusion of people's faces where possible to maintain participant anonymity.

Overall, the ethical considerations within this research related to the attribution of value judgements to participants regarding their representations of Goodwin Sands marine space. Opinions were multiple and often contradictory. It was important to avoid the assumptions that those objecting to development are deviant or stereotypically NIMBY's (Waldo 2012; Aitkin 2010; Eranti 2017) and to present participant views without bias. This was achieved through the use of descriptive language for such representations, rather than critiquing individual positions.

4.7.3. Methodological Challenges and Limitations

The challenges faced, and limitations of the research methodology, align with the ethical considerations discussed above. In addition, obtaining marine licensing data was challenging and is indicative of general engagement issues with the MMO, which are explored below before turning to the remaining methodological challenges and limitations.

Early attempts to engage with MMO licensing staff were denied along with requests to engage with the organisation more widely to explore the licence determination process. Freedom of Information requests were made to obtain details of 'desk instructions', used by licensing staff to determine applications, as evidenced by the sub-sea cable desk note available in the public domain (ESCA 2018). These were denied, along with interview requests, as evidenced in Section 5.4.4 above. The denial of data requests presented grave risks to the feasibility of this research however this also presented valuable findings regarding the publicness of the MMO as marine regulator. To overcome these methodological challenges the research approach was amended to utilise public domain marine licence application data and case examples to explore how much understanding and clarity could be formed about the marine licence decision-making process from these documents. As such, this methodological challenge led to more significant research findings and, indeed, helped to address ethical concerns regarding research positionality as access to pre-existing professional contacts and pre-knowledge was withheld. In addition to this, potential concerns regarding power relations at play in elite interview situations (Smith 2006, p651;

Goldman & Swayze 2012; Mikecz 2012; Darbi & Hall 2014) was minimised as was the risk of the MMO requesting to member-check research findings to validate, request changes or embargo results (Smith 2006, p649; Darbi & Hall 2014).

The absence of formal MMO representatives as elite participants also minimised the risk of consent issues regarding negotiations concerning recording and presenting interview responses. This was experienced within the achieved MMO staff interview in which the participant was mindful of what was put 'on record' with additional useful information being provided during the un-taped debrief (Darbi & Hall 2014, p842; Kvale 1996). The status of this information needed to be carefully considered regarding whether it could be used within the research findings and due to anonymity request the inclusion of this data has been carefully framed.

The overall interview sample could be critiqued for on the grounds of representation. The risk of excluding relevant stakeholders is apparent. This is an issue present in all spatial planning regulatory processes and forms part of the discussion presented regarding the publicness of marine licensing decision-making processes in Chapter 9.

Researcher positionality risked reliance on pre-existing working knowledge and biases towards the decision-making process and the policy underpinning it. Establishing, or re-establishing, rapport with participants was essential to gaining valid and useful data. Reflection was also of crucial importance here (Byrne 2006, p184). Research neutrality (Kezar 2003, p398) was maintained through reflection on assumptions and expectations created prior to and during interviews. A further risk was the identification of the researcher as an 'insider' leading to the presence of mistrust within participants (Sabot 1999). This has been justified above in relation to researcher positionality disclosure. These challenges were mitigated through research reflectivity and are outweighed by the privileged access gained to this area of study through the researcher's positionality in which greater access opportunities and increased ability to build rapport with participants compared to 'outsiders' were present due to the ability to "speak the 'right language" (Littig 2009, p106). Use of language within the marine licensing process is a key aspect of discussions regarding to the publicness of this process.

The methodological challenges and limitations have been carefully considered and mitigated to ensure that they present limited impact to the research findings and

conclusions. Through this process, ethical considerations have also been addressed. Further information regarding these challenges is discussed in the subsequent chapters where such information is relevant to the findings presented.

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Chapter 5. Marine Licensing Legislation and Policy

5.0. Introduction to Findings and Analysis Chapters

With the conceptual framework for this research set, and the methodology introduced and justified, this thesis now presents the primary research analysis and findings. These are split over four chapters which align with the research and sub-research questions. Empirical research is presented as illustrated in the research stages diagam included in Figure 4.3 in Chapter 4. Within these Chapters 'findings' refers to the results of the analysis of the data collected using the methodology and methods previously described.

The first two chapters (Chapter 5 and 6) provide the legislative and policy context for the Goodwin Sands marine licence case study and, also provide an analysis of the process through which the marine licence has been determined through the use of secondary source case examples. The secondary source case example data analysis findings presented in Chapter 6 are supplemented by interview data collected as part of this current research. The analysis and findings from the marine Goodwin Sands case study is presented in Chapters 7 and 8, with the former presenting the results of the analysis of the Goodwin Sands *marine licence application* and the latter presenting the analysis of the Goodwin Sands as *place*, focusing on its multiple representations of space.

5.1. Exploring the Publicness of Marine Governance

This Chapter presents the analysis and findings of empirical research considering RQ2 "*How public are the marine development governance frameworks and decision-making processes?"*, and specifically the sub-research question RQ2.1 *"How public are the marine governance institutions and legal and political frameworks within which marine licensing operates?*".

Findings are presented in five sections. Firstly, the results of legislation, policy and guidance analysis are presented. Secondly, secondary research is presented in relation to theoretical models for decision-making. Thirdly, the decision-support tools used to assess development impacts are explored, again with reference to secondary

source data. Fourthly, an analysis of development activities which require a marine licence is presented. Finally, quantitative marine licensing analysis data is presented and the complexity of marine development activity within this regulatory context is illustrated. This quantitative marine licensing analysis is used to analyse the types and quantity of marine development which is undertaken within English seas. This analysis also provides a statistical overview of the marine licensing process which contextualises the case examples included in Chapter 6 and the main case study included in Chapters 7 and 8.

5.2. Marine Licensing Legislation and Policy

The findings presented within this section are limited to the development and implementation of the Marine and Coastal Access Act 2009 (MCAA2009) marine governance regime. A timeline for development of this legislation and related policy is included in Appendix 5A[32].

The findings within this section are presented using a thematic narrative which draws on the documentary evidence listed in Appendix 4A (Stage 1 Data Collection: Legislation, Policy and Guidance Documents). This documentary evidence includes primary legislation, draft and final policy and guidance reports and transcripts from parliamentary scrutiny debates.

5.2.1. A Sea Change

Recognition from UK Government of the need for fundamental change to how UK seas are regulated can be traced back to the 2002 Marine Stewardship Report 'Safeguarding our Seas' (Defra 2007, p19; Defra 2002). However, the 2007 'A Sea Change - Marine Bill White Paper' is the first of the analysed documents to present the proposed new marine management framework. The title's wordplay sets the report's

[32] Additional marine development legislative regimes operating within English seas include the Planning Act 2008 and Petroleum Act 1998 which provide consenting mechanisms for the offshore elements of Nationally Significant Infrastructure Projects (NSiPs) – notably including Offshore Wind Farms - and oil and gas developments respectively. These additional legislative regimes fall outside of the analysis presented here however the relationship between MCAA2009 and the Planning Act 2008 is closely linked and their drafting and scrutiny were undertaken in parallel, as illustrated within the MCAA2009 timeline.

intention to address the old regulatory system which had “built up piecemeal over the centuries” (Defra 2007, p1), and the opinion that the old system was “confusing, overlapping and broken into sectors” (Ibid), as well as being “ad hoc and reactive” (Ibid, p4). The White Paper proposed, instead, a new strategic management framework “fit for the 21st Century” (Ibid, p1).

The persuasive, and often rhetorical, nature of the White Paper’s policy reform assertions appears grounded in wider New Labour Party rhetoric such as ‘good governance’, ‘better regulation’, more ‘open and transparent’ systems, ‘efficient decision-making’ and ‘ecological modernisation’ (Defra 2007, p2 for example). The White Paper repeatedly states that the proposed Marine Bill, and related policy, will implement mechanisms through which to secure sustainable development in the marine area, balance ecosystem benefits and minimise marine environmental damage (Ibid, p3). The impact of these policies and their endurance as marine policy objectives and frameworks is included in the discussion in Chapter 9. This discussion is undertaken in relation to the marine regulatory framework through which these policy proposals are implemented.

The Marine Bill states as its vision the safeguarding of “clean, healthy, safe, productive and biologically diverse oceans and seas” (Defra 2007, p6). The strategic goals introduced to achieve this vision (Figure 5.1) are based on the principles of sustainable development and are cited as receiving wide support during earlier consultation (Ibid, p1, p43).

to conserve and enhance the overall quality of our seas, their natural processes and their biodiversity
to use marine resources in a sustainable and environmentally sensitive manner in order to conserve ecosystems and achieve optimum environmental, social and economic benefit from the marine environment
to promote and encourage economically and environmentally sustainable use of natural resources to ensure long term economic benefits and sustainable employment;
to increase our understanding of the marine environment, its natural processes and our cultural marine heritage and the impact that human activities have on them; and
to promote public awareness, understanding and appreciation of the value of the marine environment and seek active public participation in the development of new policies.

Defra 2007, p6

Figure 5.1 A Sea Change: A Marine Bill White Paper – Strategic Goals

It is unclear from this document how the vision and strategic aims will translate into marine regulatory practice. The White Paper proposes that marine licensing will operate within a wider marine spatial planning system and the first stage of this will be the creation of a UK-wide Marine Policy Statement (MPS). This will be agreed by UK Government and the Devolved Administrations and designed to "help us deliver our European and international commitments, alongside domestic priorities" (Defra 2007, p22). Agreeing the MPS *after* the enactment of MCAA2009 introduces uncertainty regarding the commitments made within the legislation.

The White Paper states that this delay in setting strategic direction is a benefit, because once the legislation is passed there will be an opportunity "to look across our set of objectives, reconcile them as far as possible, and *decide on priorities* between them, based on current UK Government thinking" (Ibid, p22, emphasis added). Furthermore, "the precise content and objectives within the shared UK marine policy statement will reflect the priorities of the UK Government and devolved administrations at the time of its development" (Ibid). This is a significant statement. The stated aims of the Marine Bill and subsequent MPS were not only to manage the marine environment using the principles of sustainable development and an ecosystem-based approach, but also to set clear direction about what could be undertaken at sea using a hierarchical approach

to policy directions. In other words, the order in which the marine objectives are presented within the MPS was not to be interpreted as illustrative of their importance.

This ambitious policy reform mirrors the substantial reform to terrestrial planning through PA2008, and much of the debate and development of the MCAA2009 framework was undertaken in parallel to terrestrial debates as can be seen in the timeline included at Appendix 5A. The White Paper was produced by The Department of Environment, Food and Rural Affairs (Defra) and acknowledged as combining policy remits of several Government departments (Figure 5.2) but with no hierarchy presented.

Department of Trade and Industry (DTI)	Energy Generation
	Oil and Gas
	Renewables
Department for Transport (DfT)	Shipping
	Ports and Harbours
Communities and Local Government (CLG)	Marine aggregates
	Interation with terrestrial planning system
	Local authority responsibilities
Department for Culture, Media and Sport (DCMS)	Marine heritage
	Recreation
	Tourism
Ministry of Defence (MoD)	Defence activities in the marine area

Defra 2007, p141

Figure 5.2 Non-Defra Marine Policy Areas by Department

The MMO is proposed as a new independent delivery body to manage this holistic approach and presented as the mechanism through which the Government's vision for the marine environment is to be achieved by "developing forward looking marine plans, which provide a sound framework for: decision-making within streamlined licensing

regimes; expert marine fisheries management; proportionate nature conservation; and the effective, fair and consistent enforcement of regulation" (Defra 2007, p125). The MMO is proposed within this report as being the "champion for the integrated management of the seas" (Ibid).

5.2.2. From Draft Marine Bill to Marine and Coastal Access Act

The Draft Marine Bill was published for consultation and parliamentary scrutiny in April 2008, accompanied by a Policy Paper and Regulatory Impact Assessment (HM Government 2008a; 2008b; 2008c). 8519 public responses were received during the earlier White Paper consultation (HM Government 2008a, p17), however no details regarding the scope or content of these was provided in the Draft Marine Bill documentation. This high number of responses is indicative of the public interest in the policy reform and the responses themselves are cited as being used to "develop and refine" the policy (Ibid).

The Draft Marine Bill Policy Paper presents the need for marine governance reform with less argument, rhetoric and justification compared to the earlier White Paper (HM Government 2008a; Defra 2007). The 2005 Labour Party election manifesto pledge to "introduce a new framework for the seas, based on marine spatial planning, that balances conservation, energy and resource needs" is included in full within the Policy Paper, and the Marine Bill stated as the fulfilment of this pledge (HM Government 2008a, p13, p16). The draft Bill emphasises the proposed provision of a mechanism for "strategic", "improved" or "better" decision-making (Ibid p13, p25, p28). For example the Marine Bill will "significantly improve decision-making in the marine environment by providing clearer direction and more certainty to developers, both from industry and local Government, and to marine users generally" (Ibid, p18). Linking marine decision-making with forthcoming policy, the Marine Bill Policy Paper asserts that the finalised MPS will "provide a clear, and most importantly, a consistent steer to all marine regulators and users as to the policies that should be considered when decisions are made" (HM Government 2008a, p26). The MPS will be a "way to deliver what we want … simply and efficiently" (Ibid). The MMO will "build strong and effective relationships with local authorities and coastal stakeholders" (HM Government 2008a, p27).

The accompanying Draft Regulatory Assessment to the draft Marine Bill states that UK sustainable development commitments necessitate the need for Government

intervention within marine management (HM Government 2008c, p3). Going further, the Draft Regulatory Assessment states that "existing institutional arrangements carry considerable risk that we will not make the best use of marine space and resources and will be unable to cope with the increased demands we expect to be making on the marine area in the future" (Ibid). The narrative expressed here is characteristic of that running through the entire drafting process. The justification for reform appears grounded on an unstable foundation of vague and undefined sustainable development goals. The Assessment states that the "Marine Bill is a framework Bill" and, as such, is "enabling legislation" (Ibid, p5). It is therefore implied that sustainable development is to be enabled, but what sustainable development would look like or how this is to be assessed is not defined. Recourse to five broad themes of benefits – efficiency savings, greater certainty, environmental benefits, enhanced knowledge management and expanded knowledge base and, maximising sustainable economic benefits from marine resources (Ibid, p22) – do little to strengthen this foundation. The prevalence of economic factors in this assessment appears easier to justify in quantitative terms: *best use of the sea* therefore appears to be interpreted as *most financially beneficial use of the sea*.

During parliamentary scrutiny of the draft Marine Bill, the Joint Committee raised several concerns regarding the lack of policy direction and clarity within the proposals. The 'framework' nature of the draft Bill was met with reservations by the Committee, who raised concerns that "too much of its policy is contained in secondary legislation or guidance" (HM Government 2008d, p5). The nature of the draft Bill was met with apprehension, as evidenced below:

> "In its current form the Bill is—and is only intended to be—a piece of framework legislation, leaving the Government to decide exactly how or what it envisages doing with the powers set out in it. Much of the practical information necessary to implement the Bill is to be contained only in guidance. *The absence of that guidance at this time makes it very difficult to understand the impact, or intended impact, of the draft Bill, let alone subject the policy to detailed scrutiny. Many witnesses raised this issue with us"***.** (HM Government 2008d, p13, emphasis added).

In addition to this, the draft Bill was seen as "weak [and] unclear and should set out a stronger more proactive duty" (HM Government 2008d, p21). This perceived lack of clarity is a significant area of concern in relation to the utility and function of this Bill. If

a legislative document lacks clarity then its efficacy and value are diminished in relation to its regulatory authority. Context is an important consideration here, with ambiguity within legislation allowing for project-based decisions to be made more easily. Concerns were also raised regarding the delayed and shortened period in which to conduct the Joint Committee's scrutiny, particularly given the length and complexity of the draft Bill and its extensive reform proposals (Ibid, p7).

Despite these concerns and comments, MCAA2009 gained Royal Assent on 12 November 2009. Much of the wording of MCAA2009 remains unchanged from the Bill but some text has been refined or expanded to address the concerns raised during consultation and development or to make certain clauses clearer. A comparison of relevant sections of MCAA2009 and draft Marine Bill, along with both final and draft explanatory notes is included in Appendix 5B[33]. Key differences between the draft and final legislative document are included below which relate specifically to the duties and functions of the MMO and the marine licensing process itself.

MMO Duties and Functions

Where the draft Bill states simply that the MMO must "carry out its functions with the objective of making a contribution to the achievement of sustainable development" (HM Government 2008b, p28), this duty is greatly expanded in the enacted legislation. Additional reference is included to clarify that, as marine regulator, the MMO cannot achieve sustainable development contributions on its own (HM Government 2009a, s2(1)).

MCAA2009 asserts that, in exercising its sustainable development duties, the MMO can "take any action which it considers necessary or expedient for the purpose of furthering any social, economic *or* environmental purpose" (HM Government 2009a, s2(2) emphasis added). The Act's Explanatory Notes expand this to state that "the MMO may further *any* of the three core elements of sustainable development. This may be necessary to ensure that an *appropriate balance* between environmental,

[33] The relevant Parts of the Act for this thesis, with its focus on marine development within the marine licensing process are: Part 1 (The Marine Management Organisation), and Part 4 (Marine Licensing). Part 3 (Marine Planning) is considered in relation to the Marine Policy Statement only, and not considered in depth. Part 8 (Enforcement) is considered in relation to marine licensing enforcement only.

social and economic considerations is reached" (HM Government 2009b, s46, emphasis added). Furthermore the Explanatory Notes stipulate that the MMO will "administer marine *environmental* licensing" (Ibid, s12, emphasis added). This phrase is found nowhere else within the draft or final legislation, or within marine policy documents. It is unclear whether this is simply a typographical error, however the inclusion of this new term for marine licensing, along with a definition of sustainable development which allows regulator discretion over its application of sustainable development principles, invites critique of the document's authority.

Marine Licensing

MCAA2009 Part 4 relates to marine licensing and contains only minor amendments compared to the draft Bill[34]. Licensable marine activities are defined in s66 and details of the requirements for determining marine licences provided in s69. The legislation stipulates that marine licences must be determined with:

> "regard to- (a) the need to protect the environment, (b) the need to protect human health, (c) the need to prevent interference of with legitimate uses of the sea, and such other matters as the authority thinks relevant" (HM Government 2009a, s69(1)).

'Environment' is legally defined within both MCAA2009 and the accompanying Explanatory Notes as "the local and global environment; the natural environment; and… any site of historic or archaeological interest" (HM Government 2009a, s240). Reference to this definition of 'environment' including "its ordinary meaning" has been removed from the Marine Bill's denotation (HM Government 2008b, p88). This appears to acknowledge the complexity of the term 'environment' which, like the term 'nature', discussed in Chapter 3, and as the Goodwin Sands case study analysis and findings presented within Chapters 7 and 8 demonstrate, has multiple meanings depending on theoretical and ethical underpinnings.

When determining a marine licence the licensing authority – the MMO – is legislated to "have regard (among other things) to the effects of any use intended to be made of

[34] For example, in s102 (Notice to stop activity causing serious harm) (s96 of draft Bill) "causing, or will cause, any effects/an imminent risk" has been expanded to "causing, or is likely to cause…".

the works in question" (HM Government 2009a, s69). This is limited only to construction works. There is, therefore, no requirement to consider the intended use of material extracted from the seabed within the determination of such a marine aggregate extraction application. MCAA2009 s69 also includes a duty for the licensing authority to "have regard to any representations which it received from any person having an interest in the outcome of the application" (HM Government 2009a, s69(3)) along with a duty to "consult any person or body which has particular expertise in any matter arising in relation to that application" (Ibid, s69(4)(b)). These two duties are important to note and are evidenced within the case study analysis as a core consideration regarding the publicness of marine licensing decision-making.

MCAA2009 appears to have been drafted to allow flexibility towards the treatment of emerging and future marine development. It is also significant that the overarching National Planning Policy Framework (NPPF) also applies to marine development regulation along with its presumption in favour of sustainable development (MHCLG 2019, p4). Taking the flexibility evidenced within MCAA2009 towards development and the application of sustainable development decision-making principles together with the NPPF presumption in favour of sustainable development clause appears to limit the conditions under which licence applications could be refused. This is supported by the quantitative marine licensing application analysis findings presented in Section 6.4.

This broad brush approach to marine legislation allows for its longevity as it minimises the risk of requiring amendment if, and when, applications for new types of marine development are proposed. However, this flexibility also limits its ability to make meaningful decisions based on strategic direction: What types of marine development should be prioritised and why? Instead this flexibility allows for a pragmatic approach towards decision-making in which a strategic direction would potentially limit development activity and, given the political context in which this legislation was granted, project level pragmatism is favoured over central government dictate. Within the draft Marine Bill Policy Document, this direction is cited as to be included within the MPS and other secondary legislation required to delegate Secretary of State decision-making powers to the MMO. These documents and statutory instruments were not in existence when primary marine legislation was published and their development is discussed below.

5.2.3. UK Marine Policy Statement

The UK experienced significant political change following the enactment of MCAA2009 in November 2009, with the 2010 UK general election result ending 13 years of New Labour Government and the commencement of the first Coalition Government in decades. It was under this Conservative Liberal Democrat Coalition that consultation on the draft MPS occurred. The Marine Bill White Paper had previously stipulated that the priorities set out in the future MPS would “reflect the priorities of the UK Government and devolved administrations at the time of its development” (Defra 2007, p22), and therefore this policy was written to address Coalition rather than Labour priorities.

Three parallel consultation periods occurred between 21 July 2010 and 13 October 2010, seeking comments on the draft MPS, secondary legislation under the Act in relation to Marine Licensing, and an overarching guidance document on a marine planning system for England. The details of these are illustrated in Figure 5.3.

Document title	**Draft UK Marine Policy Statement**	**Consultation on a marine planning system for England**	**Second consultation on secondary legislation under the Marine and Coastal Access Act: Part 4 Marine Licensing**
Remit	UK-wide	England	England
Number of responses	125	76	69
Views requested	The appropriateness of the UKMPS as the "framework for marine planning and taking decisions that affect the marine area" (HM Government 2010, p2) Clarity of the purpose and scope of the UKMPS. the vision for marine planning and the high-level principles in relation to environmental, social and economic considerations and of the policy objectives (HM Government 2010, p5)	The general purpose and benefits of the marine planning system, including its scope, context, structure and implementation, the roles and responsibilities within the marine planning system, interaction with the terrestrial planning systems, and decision making including transitional arrangements (Defra 2010c, piv)	The marine licensing system including delegation of functions to the MMO, the application process (including pre-applications), fees and charges, appeals, exemptions, EIA requirements and the establishment of a public register for applications. (Defra 2010b, p4)
Views not sought	The content of the policy objectives, "as they reflect existing policies developed through separate consultation processes" (HM Government 2010, p5)	Details of the UKMPS (Defra 2010c, piv)	Monetary penalties for licensing offences and appeals against statutory notices" (Defra 2010b, p5).
Notes * Whilst the Marine Licensing Secondary Legislation draft was subject to a consultation period during the final months of the Marine and Coastal Access Act debates, the main consultation discussed here was opened in July 2010, concurrent to that of the Marine Policy Statement and an additional consultation on Marine Planning in general.			

HM Government 2010; Defra 2010b; Defra 2010c

Figure 5.3 Marine Consultations (UK and England) 21 July 2010 – October 2010

These consultations did not include public consultation. Noted here is the statement that MPS consultation does not seek views on "the *content* of the policy objectives" (Defra 2010d, p5, emphasis added). This *content* was instead being considered through separate consultation on the 'marine planning system for England' (Defra 2010c) and is analysed below.

The focus within this sub-section is limited to the consultation, debate and final version of the MPS and the wider marine planning consultation and published guidance document. A comparison of the text within the draft and final MPS is included at Appendix 5C illustrating the level of amendment made to the draft following consultation and debate. Analysis and findings regarding the marine licensing secondary legislation itself is presented in a separate sub-section following this presentation of MPS and wider marine planning consultation analysis.

The MPS is resolute that it "does not provide specific guidance on every activity which will take place in, or otherwise affect, UK waters" (Defra 2010d, p21). Instead it includes five 'high level marine objectives' which are: achieving a sustainable marine economy, ensuring a strong, healthy and just society, living within environmental limits, promoting good governance and, using sound science responsibly (Ibid, p25). The document makes it clear that this list is not a hierarchy, and that when making development consent decisions licensing authorities must "weigh the potential benefits and adverse effects of each proposal" (Ibid, p27).

Likewise, the order of presentation of policy objectives detailed in Chapter 3 of the MPS is not to be considered as alluding to any prioritisation of any one activity over the other (HM Government 2011a, p11). This assertion is reiterated within the Environment Food and Rural Affairs (EFRA) Committee report on the draft MPS (HM Government 2011a). The MPS does not "provide a 'flow chart' for decision-making, as this needs to be determined by each administration when considering specific areas in the marine planning process" (Ibid).

Marine priorities will instead depend on "local considerations such as resource availability, geography, spatial restrictions, density of complementing/ conflicting activities etc" (Ibid). Reference to 'local considerations' appears similar to local authority terrestrial planning and, whilst the English marine area has been divided into marine plan areas, the MMO have responsibility for all of them, rather than local organisations. This statement therefore appears to task a national organisation with acting as multiple local bodies. A consideration here is, therefore, how affect this national organisation can be in achieving this goal. Whilst a response to this is not within the remit of this, specifically marine licence decision-making research, the findings presented within this thesis in relation to how successful a national

organisation can be at addressing local area concerns are highly relevant to this wider marine planning question.

Like previous comments raised within the Marine Bill drafting process, presented in Section 6.2.2 above, the lack of hierarchy given to marine policy objective was again raised as a major concern for some respondents during the MPS consultation and within parliamentary debate on the draft policy statement. Select Committee members contended that “a policy document should lay out the choices that need to be made and should then say which one the Government are likely to choose” (HM Government 2010, 15:49). In this way a policy should be “a route map that gets you from A to B by a chosen route, but it allows others to argue that a different route would be better” (Ibid). Other comments made during the Select Committee debates included the view that the high level marine objectives “tr[y] to be all things to all people” (Ibid). This was particularly felt to be the case for economic and social considerations (Ibid). As presented to the Committee, the document was felt to be “simply a collection of existing sectoral policies and objectives [which] does not set any strategic direction or policy prioritisation or provide a clear steer for marine plan authorities or marine decision-makers” (Ibid, 16:28). This point is expanded below:

> “[The draft MPS] does not achieve its legislative purpose of clearly identifying policies which will ensure that the marine planning system contributes to the achievement of sustainable development. It fails to adopt strong sustainability by recognising that ultimately all economic and social activity is dependent on the natural environment, its resources and the ecosystem services it provides” (HM Government 2010, 16:23).

The MPS is a UK wide policy statement which required agreement between all of UK devolved administrations. The holistic benefits of this joint approach are acknowledged by the Select Committee, however the consequential “lack of detailed guidance provided” is a recurrent issue raised both in parliament and in consultation responses (HM Government 2011a, p14). A national marine plan for England, as a way of addressing this issue within the English context, was suggested and ultimately rejected. Wales and Scotland have produced national marine plans (Welsh Government 2019; Scottish Government 2019) whereas the English marine area is split into marine plan areas and priorities set at this ‘regional’ level (HM Government 2016). This appears epistemologically distant from wider Coalition spatial planning

policy which saw the abolishment of regional governance and planning and the introduction of The Localism Act 2011 (HM Government 2011h).

Given the Marine Bill commitment that MPS priorities would be set by whichever Government was in power at the time of its drafting, the further delegation of priority setting within the MPS is disappointing, but understandable given the wider Coalition governance policies outlined above. Marine priorities are devolved by the MPS to the local level through the assertion that it is within marine plans themselves that these decisions will be made (HM Government 2011b, p7). Against this proposal, the Select Committee disputed the minimal guidance provided within the MPS and suggested that it should instead strive to go beyond the "merely aspirational" by including some "harder edges" (HM Government 2011a, Ev6). Government response to this demonstrates Coalition values of Localism and the need for minimal Central Government agenda setting:

> "[I]f the Marine Policy Statement did any more than list the activities that could or should be considered as part of the planning process, it would then stray into the actual planning area itself, so it does not set one above the other… What we have to provide is a framework from which a fair and open planning system can be created and in which everybody who needs to be involved in that process can be". (Richard Benyon, Parliamentary Under-Secretary of State for Natural Environment and Fisheries (HM Government 2011a, Ev6))

The policies underpinning the MPS high-level marine objectives were developed within the parallel 'Marine Planning System for England' consultation (Defra 2010c; 2011b; 2011c). The consultation document places the MPS at the core of the English marine planning system and, considers "the wider context within which the MPS operates" (Defra 2010c, piv). The document provides evidence of a return to previous marine policy reform language with its references to the increased activity at sea and risks faced in relation to environmental change (Ibid, p1). The document considers that the direct benefit of the marine licensing regime within this marine planning system is that "decisions [are] taken consistently, in line with national priorities and Plan area objectives for marine resources [leading to] more certainty for regulators due to an agreed, assured, accessible evidence base for decision-making" (Ibid, p3). This will be achieved through the MPS.

Following the close of the consultation periods discussed above a final marine planning system guidance document was produced. This guidance document places more emphasis on the desire to bring marine planning in line with its terrestrial equivalent. This is evidenced through the requirement during the determination of marine licences to use a "robust evidence base" and make use of a "non-exhaustive list of… material conditions" (Defra 2011c, p23; p90). A compelling inclusion within the marine planning system guidance document appears in the glossary of terms which outlines selected planning terms used within the UK marine planning system as a whole "adapted from the UNESCO definitions" (Defra 2011c, p96). This relates to the definition for 'objective' which is stated as follows:

> "An objective is a statement of desired outcomes or observable behavioural changes that represent the achievement of a goal. Characteristics of good objectives are that they are Specific, Measurable, Achievable, Relevant, and Time-bound, i.e., SMART." (Defra 2011c, p96)

The relevance here is evident. As the 'cornerstone' of the marine planning system the MPS is therefore subject to the above definition but the high level marine objectives do not appear to exhibit 'SMART' characteristics. In particular, objectives evade specificity, measurability and time-boundedness[35]. At the time of drafting this thesis, in December 2019, it remains too soon to comment on how achievable the MPS objectives have been. The apparent fluidity of definition of the term 'objective' is of more than semantic importance. It appears to undermine the utility of the MPS for decision-makers due to the limited value of its objectives under the SMART characteristics.

5.2.4. Marine Licensing Secondary Legislation

The MMO gained its regulatory powers through the Marine Licensing (Delegation of Functions) Order 2011 (HM Government 2011c). Through this legislative instrument, the Secretary of State for Environment delegated decision-making authority in relation to the determination of marine licensing applications. Consultation on this Order was

[35] An interesting consideration here is the utility of SMART objectives within marine management. For example, the lack of specificity within impacts upon cultural ecosystem services, appears to conclude, on this model at least, that any objective or management measure design for these evades the label "good".

undertaken in parallel to the MPS and overarching marine planning system consultations discussed above. The Marine Licensing (Delegation of Functions) Order consultation attempted to address issues raised within earlier Marine Bill consultation and scrutiny including the identification and role of statutory consultees within the licensing process, the lack of third-party appeals process and the dual-body consenting regime caused by the consenting of offshore NSIP's under PA2008 ((Defra 2010b, p15, p21; Defra 2010f, p7; Defra 2011a, p44). Responses to this consultation raised similar issues to earlier consultations but were generally supportive of the proposed marine licensing system which appeared "streamlined, consistent, transparent and fair" (Defra 2010f, p4).

Within the Government response to the marine licensing secondary legislation consultation document, MCAA2009 is used as justification for not making amendments to the proposed marine licensing system. An example of this relates to the absence of a third party appeals for marine licence decision-making. The response provided to queries regarding this absence was that "this was restricted under the Act … The Government's view is that opening the system up to appeals from third parties could hold up vital developments" (Defra 2010f, p7). This is accompanied by the assertion that the MMO will ensure that "all outstanding issues or differences of opinion on an application [are] to be resolved during the application process" (Defra 2011a, p23). This assertion appears as an attempt to reduce the risk of, and the need for, third party appeals following licence determination is delegated to the MMO. This is an important point to note, due to the lack of committee approvals within the marine licensing process, in relation to terrestrial planning processes.

This removal of the risk of third party appeal rests on insisting that licence application issue resolution is successful. The Government's proposed method of achieving this is through the MMO's consultation with primary advisors and interested parties during both a (voluntary) pre-application stage and during licence determination (Defra 2010f, p20; Defra 2011a, p11). The consultation process is to remain *flexible* "because of the wide range of activities that will require marine licences from stand-alone small jetties to substantial harbour developments" (Defra 2011a p15). It is also to be *proportionate* in relation to "the size and risk posed by the proposed activity" (Ibid). Statutory consultees are not specified and this is justified through the assertion by Government that this approach will "enable all potential consultees to be on equal footing (none are

more or less important than others), to ensure that organisations or individuals consulted are relevant to the project and to avoid the need to update secondary legislation when there are organisational changes" (Defra 2011b, p15). Some details of statutory nature conservation bodies (SNCBs) are included in relation to consultation requirements made under EIA or Habitats legislation (Ibid, p16) and a range of additional advice bodies are mentioned but are not afforded statutory status. These include the Maritime and Coastguard Agency (MCA), Trinity House, Historic England and the Crown Estate for navigational, heritage and land ownership matters, all of whom gain statutory marine remits under separate legislative instruments. The absence of statutory consultee provision within MCAA2009 could therefore be seen as leading to unnecessary complexity regarding the ability of these organisations to conduct their statutory duties within the marine environment. This also leads to lack of clarity regarding the role of non-statutory stakeholders which notably includes the public.

As evidenced above, the UK marine governance regime endows the MMO with the label of 'champion of English seas'. However it is the Centre for Environment, Fisheries and Aquaculture Science (Cefas) which provides the main source of marine scientific advice for application determination (Defra 2011b, p16). Earlier policy debate regarding whether Cefas should be subsumed into the MMO concluded that the disproportionate size of Cefas in comparison to the MMO would result in the MMO "los[ing] focus on its functions by combining it with such a large science and research oriented organisation" (Defra 2007, p143). This does raise questions regarding the expert status of the MMO which are not addressed within marine policy development documentation.

It is clear from these policy analysis findings that the development of UK marine legislation and policy raises several queries regarding the clarity and effectiveness of the governance system. It is within this context that marine licensing is undertaken for development applications within English seas. Details of the marine licensing decision-making process are largely absent from marine policy and therefore in order to conduct in-depth analysis of the main Goodwin Sands case study the remainder of this Chapter shifts focus towards more practical considerations.

5.3. Assessing and Determining Marine Licence Applications

As discussed in Chapter 3, the marine licensing process utilises EBA to manage English marine resources, and this has been shown to be both challenging with regards to the assessment of cultural ecosystem services, and potentially problematic with regards to the conceptualisation and value of the environment on which the approach rests. This section explores marine licensing decision-making within the wider context of environmental ethics and makes explicit the complexity of the process in which marine regulators operate. By undertaking this contextualisation, the complexity hidden within the simple statement of how marine licences are to be determined under MCAA2009, shown in Figure 5.4 below, is explored.

Marine and Coastal Access Act 2009, Part 4, Chapter 1
69 Determination of applications

(1) In determining an application for a marine licence (including the terms on which it is to be granted and what conditions, if any, are to be attached to it), the appropriate licensing authority must have regard to—

(a) the need to protect the environment,
(b) the need to protect human health,
(c) the need to prevent interference with legitimate uses of the sea,

and such other matters as the authority thinks relevant.

HM Government 2009a, pp46

Figure 5.4 Determination of Marine Licence Applications

This section builds on Chapter 3's consideration of how multiple value-systems can be considered within development impact assessment and marine licensing decision-making thus highlighting the complexity of the decision-making process.

As Chapter 3 made explicit, the relationship between human activity and the marine environment is complex; oceans have shaped human history, and human history has shaped the oceans. This section introduces additional secondary research related to

decision-making, in order to bridge the policy-practice divide and present 'ideal' decision-making processes through which to consider and critique marine licensing processes.

5.3.1. (Marine) Environmental Decision-Making

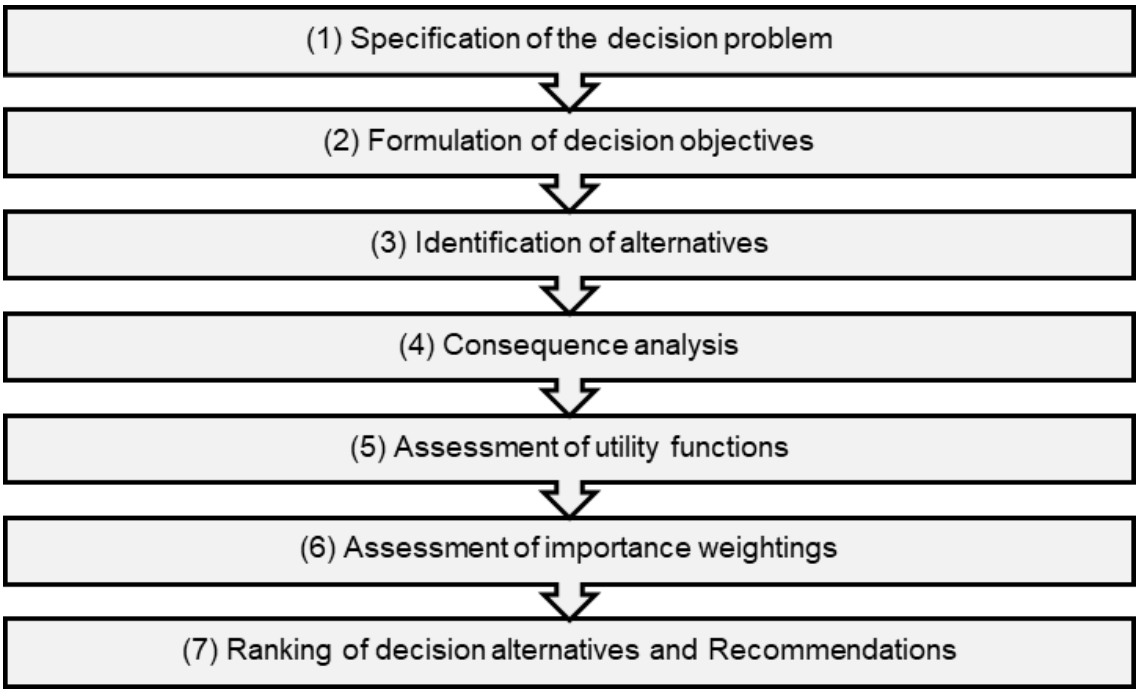
Environmental decision-making considers the potential impacts of development on human and non-human receptors prior to consenting and conditioning projects. These assessments, consents and conditions can occur "in a number of different arenas each with their own language and interests" (Toke 2011, p533; Boyes & Elliot 2015). These decisions are also made within "the background of a distribution of property rights, incomes and power and it will distribute damage, costs and benefits across different social groups" (O'Neil *et al* 2008, p5). Marine development projects have the inherent potential to not only lead to user conflict, but more fundamentally, to bring local values into conflict (Dalton *et a*l 2015, p866). MSP, and specifically marine licensing, is therefore "promoted as a rational system that can produce consensus and win-win outcomes for conflicting stakeholders" (Flannery *et al* 2018, p32). This promotion has been seen as naïve because it avoids engagement with debates regarding the democracy of decision-making and indeed decision-making processes themselves and' as such' this section first offers an account of decision-making theory followed by its associated ethical influences (Ibid).

A useful entry point into the environmental decision-making literature is the assertion that "decisions are important not only because they are at the origin of environmental problems, but also because they are at the core of solutions to those problems" (Chechile 1991, p2). 'Decisions' here refers to environmental decision-making, and for this thesis, specifically marine licensing consent decision-making. This simple statement introduces the two subjective and value laden concepts of 'problems' and 'solutions' illustrating how "the decision process requires numerous judgements, and individuals can be expected to differ with respect to their perceptions, knowledge and values" (Ibid p10 see also Seip & Wenstop 2006, p3).

5.3.2. Theoretical Models for Decision-Making

Taken generally, decision-making models – within system theory rather than specific to environmental or marine planning - range from a traditional three-step approach to a more nuanced multi-step approach. The former involves identification of a problem,

identification of possible solutions and the selection of a course of action (Brown *et al* 2002). An example of the latter is presented in Figure 5.5 (Seip & Wenstop 2006).



Seip & Wenstop 2006, p22

Figure 5.5 Rational Decision-Making Model

Bias within more simplistic models is "implicit rather than explicit, and … usually embedded in the subconscious" (Brown *et al* 2002, p61). Where it is made explicit bias is identified as the ethical principles on which selection of possible actions is grounded (Bedau 1991).

These rational decision-making models make decision scenarios look linear. In reality there is far more complexity involved. Considering a marine development consent, in practice, and to foreshadow the research presented in Chapter 6, using this model provides an insight into this complexity. The decision problem at step 1 is easily defined as the application for consent – with or without conditions – to undertake a development project. Step 2 provides little complexity given that the objectives of the decision are to provide consent or refusal for a particular licence application.

Complexity emerges at step 3 where the alternatives can range from do nothing[36], to permit the proposed development as presented for a low impact case example, and to a wide range of nuanced alternatives for a larger project with an infinite array of proposal amendment and consent condition possibilities. Steps 4-7 require the decision-maker to select which impacts to consider and whose advice or opinion to seek. This formulation is caveated with the acknowledgement that that "the decision problem is not specified until it is clear who the decision-maker is and who the stakeholders are" (Seip & Wenstop 2006, p25). Given the ambiguous array of potential stakeholders for marine licence applications seen in Chapter 3, and the potential for additional consent requirements – planning permission for intertidal works, environmental permits etc. – the licensing process appears to evade attempts at rationality using this model.

Rational decision-making models present an 'ideal' process and offer no appraisal of their prescriptive merit (Chechile 1991, p8; Seip & Wenstop 2006). For example, in step 7 in the model presented in Figure 5.5 decision alternatives are ranked and recommendations made. The deliberative processes decision-makers adopt within this step are influenced by their personal, institutional, epistemological and ethical beliefs. As such deontological, consequentialist and normative (or virtue) ethical approaches offer alternate guidelines for how to select the best outcome from a choice of alternative decision outcomes (Sagoff 1998, p214; O'Neil *et al* 2008). In addition to these, positivist approaches attempt to remove ethical subjectivity through reliance on empirical science and the role of experts with little to no role envisaged for the general public within decision-making (Portney 1991, pp196). The majoritarian nature of the utilitarian approach is well suited to positivist decision-making processes.

English marine policy takes an evidence-based approach (De Santo 2017, p42). The role of science, and logical reasoning based on a positivist approach, lends itself to a structured approach to decision-making. The stated benefits of this are seen as transparency and improved communication, clearer connections between decisions

[36] Refuse development (don't build; don't dredge; don't dispose)

and stated objectives, institutional memory in the decision-making process and better use of resources (Conroy & Peterson 2013, p8; Brown *et al* 2002).

Basing marine licensing decisions on scientific evidence seems, at first glance, to offer a framework under which outcomes can be justified and thus the best outcome can be easily chosen. However care is needed here because “the subtle differences between how science is perceived can lead to substantial differences in how it is used in the political arena, and regulators and policymakers may have unrealistic expectations of science” (De Santo 2017, p42). Three inter-related issues arise from this: “(1) the nature of the evidence itself, (2) the normative, moral, or ethical ‘politics’ of policy-making, and (3) the operation of power in the policy process” (Juntti *et al* 2009, in de Santo 2017, p42). The complexity of environmental decisions also leads to disagreement between different individual decision-makers involved in a given case (Conroy & Peterson 2013, p7). All participants of a decision-making scenario operate within different socio-political arenas with different, often conflicting, key issues to address. Related to this, multiple epistemic frameworks underpin their positions, which in turn affects their evaluation approaches. This is illustrated in Figure 5.6.

Object of Evaluation	Type of Evaluation: Static	Type of Evaluation: Dynamic
Change	*Seeks to **capture and quantify current preferences** for specific environments.* Characteristics of approach: • Valuation in terms of current willingness-to-pay (WtP) • Positive Economics: role is to measure benefits or services, not to make value judgements • Measures revealed and stated preferences (which are fixed and pre-date decisions) • Breaks nature into commodity-sized chunks • The value of a thing is based on market choices = WtP and changes accordingly	*Creates space to allow controversies in which it is assumed that **current values and preferences are open to criticism, change and reprioritisation**. Practitioners in this situation often dismiss alternatives, arguing only their approach is correct/useful.* Characteristics of approach: • Open debate about the nature of environmental values • Controversy is dominant • Space is made in which to debate anthropocentrism, presentism and economism • Ongoing debate about moral and other obligations towards nature
Actions	***Aggregates individuals' preferences** to make decisions based on a cost-benefit decision rule.* Characteristics of approach: • Evaluates actions by identifying WtP values for each particular change foreseen • Aggregates WtP for creating or avoiding these changes • Aggregates benefits and costs across all consumers • Use cost-benefit analysis (CBA) and/or ecosystem service valuation • Take actions that maximize the ration of benefits to costs • Seeks 'substantively rational' decisions	*Recognises unresolved controversy about values and **creates a deliberative process in search of acceptable policies**.* Characteristics of approach: • Evaluate Decisions to act according to emergent consensus regarding a favoured development path to the future (consensus building) • Pursue *procedural* rather than *substantive* rationality • Evaluate procedures: good procedures lead to better decisions • Evaluate *inputs* to decision processes (fair representation, respect for others, etc.) • Seek policies that protect as many plural values as possible • Institutional economics replaces micro-economic aggregation • Emphasize changes in structure of decision situations by analysing and modifying incentive structures

Norton 2017, p244

Figure 5.6 Multiple Ways of Evaluating Environmental Change

In addition to epistemic frameworks for decision-making, the relationship between the decision-maker and those impacted by the decision affects the effectiveness of marine licence decision-making and its publicness. This is discussed below with reference to marine licensing decision-making.

5.3.3. Decision-Making within Public Bodies

Two important and interrelated points made above require expansion in order to consider the types of decision-making operating within the MMO's marine licensing department. Firstly, English marine policy stated the intention for the MMO to provide *transparent* decision-making, and secondly that it demonstrates improved communication so as to be *accountable* to the public for which it serves as regulator (Defra 2004). As seen in Chapter 3 (Figure 3.11) the MMO is a Non-Departmental Public Body (NDPB[37]), part of the 'Defra family' of government departments and agencies, and is nested, therefore, in the wider ministerial departmental organisation which makes up HM Government. The NDPB status of the MMO impacts on the type of decision-making it can be said to undertake. Can decision-making be seen as autocratic if the decision-maker is enmeshed within a complex network of government agencies overseen by a ministerial department? Or does this lack of transparency hide an autocratic process, where consultative and democratic decision-making is suggested but not achieved? Does the inclusion of such an array of departments with marine remits allow for consensus to be reached[38]? Does this diminish the MMO's decision-making authority? Addressing these supplementary questions forms a key area of exploration within the primary research findings presented in this thesis, culminating in the discussion presented in Chapter 9. In the remainder of this subsection transparency and accountability of decision-making are explored as these are key to public acceptance of consent decisions.

[37] Also known as Quasi Arms-length Government Organisation (QUANGO), although this term has negative connotations associated with it, the consideration of which detracts from this current debate and risks implied bias within discussions of the MMO's status and is therefore avoided.
[38] Consensus based decision-making has been commonly critiqued because it "necessarily involved peer pressure and resulted in lowest common denominator decisions" (Innes & Booher 2015, p199)

The status of NDPB's illustrates how this type of governance delivery body impacts the transparency and accountability of the decisions made by such organisations as the MMO. Quango's are "neither public nor private, but are a hybrid" (Flinders 1999, p3; Hogwood 1995). Utilising private sector management techniques is one of their main benefits. Non-political by design, their decision-making can therefore be seen as unbiased by party politics (Ibid, p9). Their poor public image greatly impacts perceptions of democratic accountability and transparency in NDPB decision-making (Weir 1995, p128; Hogwood 1995; Flinders 1999). Lack of clarity regarding the "new magistracy of unknowable, and often untouchable, individuals" who made decisions within NDPB's leads to important questions here (Flinders 1999, p4; Weir 1995). If a government minister makes an unpopular decision they can be punished at the polling station, but whilst a public servant within an NDPB can be subject to disciplinary procedures these remain out of the public eye and public account.

Without this democratic accountability, trust in decision-making risks erosion unless decisions are seen to be transparent, and transparency has therefore "become central to the policy debate over how to build and sustain public trust in modern institutions" (Brown *et al* 2014, p30). To overcome this challenge the use of Freedom of Information (FOI) requests for data pertaining to consent applications is seen as presenting transparency in action (Metcalfe 2014, p248). However, the need to request 'hidden' details for scrutiny alludes to the existence of processes from which publics are not fully involved from the outset. If the assessment on which decisions are made are accessible and transparent and consents justify their disagreement with public objectors then, in theory at least, there is no additional decision process data to scrutinise.

5.4. Assessing Impacts

Marine licence determination involves considering the 'best' course of action for a particular development proposal within a complex system of environmental and ethical values, and considering a diverse range of impacts. This section considers how decision-support tools, and specifically the Environmental Impact Assessment (EIA) process on which marine licence decision-making is based, are utilised to arrive at decisions which meet the criteria of being transparent, legitimate and fair. It should be

noted here that whilst EIA as a conceptual tool has evolved greatly since its conception in the 1985 EU Direction, this thesis focuses on the use of EIA methods in practice.

5.4.1. Decision-support Tools

Decision-support tools are stated as using valuation and trade-offs "in order to optimize the (sustainable) benefits receive[d] from the interaction between ecosystems and humans, social and built capital assets" (de Groot *et al* 2012, p59). EBA can therefore be seen as a framework in which a common language and set of metrics to be used to evaluate the benefits and trade-offs associated with the development decision (Klain & Chan 2012, p104). For advocates of this approach, the use of a trade-off analysis framework, closely linked to stakeholder priorities, can "inform the design of the economic, social and ecological evaluation of options, and to identify who should be involved in the deliberative process" (Brown *et al* 2002, p78). There is, however, implied normativity inherent in the subjective nature of the decision-making process. The challenge for these decision-support tools is to address all pertinent issues equitably particularly when faced with vocal stakeholder groups.

One common approach within decision-support tools is to use monetary value as a common language for assigning value, but this requires many caveats (de Groot *et al* 2012, p59). Advocates of this approach apply a stakeholder's willingness to pay (WtP) as a "good predictor of future facility use, a snapshot of public preferences at the point of decision [which] could be very useful as a proxy measure" (Norton 2017, p245; see also Sagoff 1998; McCartney 2006; de Groot *et al* 2012). However, this approach requires socio-economic contextualisation to mitigate the risk of devaluing "the true value of ecosystem services for poor and vulnerable communities due to inability to pay" (de Groot *et al* 2012, p58). Furthermore, the epistemological background of respondents affects WtP articulating:

> "[Respondents] may 'purchase' a clear conscience or the approval of the questioner. Alternatively, the same expressed WtP may indicate willingness to contribute to a worthy cause, to defray a 'fair share' of society's costs, to improve the lot of future generations, or 'to avoid violating the rights of others, including non-human species'" (Sagoff 1998, p223).

Economic models of valuation such as WtP can provide benefit to EBA due to the use of the common language of "metrics (dollars) that have meaning to publics, policy-makers and decision contexts" (Chan *et al* 2012, p8; Hattam *et al* 2017). However this

does involve the presumption that EBA "adopted an essentially economic worldview" (Ibid) which does not necessarily fit with all kinds of value. The value ascription 'you have to be there' is used colloquially to indicate that "no available representation of an event could capture the way the event made a person feel" (Ibid, p10; O'Neil *et al* 2008). This seems applicable to cultural values and cultural ecosystem services. What price can be put on spiritual connection to place? Use of economic valuation methods, such as hedonic pricing methods, travel cost methods, damage cost avoided/replacement cost/substitute cost, contingent valuation, contingent choice methods (WtP) and benefit transfer methods compromise the ability to express such values due to the lack of flexibility in relation to expressing moral and ethical concerns. (Klain & Chan 2012, p104; Seip & Wenstop 2006; Tonin & Lucaroni 2017).

5.4.2. Environmental Impact Assessment

For larger development plans and projects the requirement to conduct an EIA prior to consent application provides an alternative, and empirical, decision-making framework[39]. EIA requirements are based on "the public demand for open debate of controversial environmental issues" (Clark *et al* 1988, p1). Article 9 of the EIA Directive (European Commission 1985) provisions the public with the right to be informed of the decision, any conditions attached to it and in addition must "be given the reasons and consideration on which the decision was based" (Heinelt *et al* 2001, p37). EIA can therefore be seen as "capable of opening up the prospect of environmental democracy, or, in more general terms, an encouragement of participatory democracy" (Ibid, p40). However EIA critics argue that the process "emphases negative impacts" stressing the need for a more holistic approach to impact assessment (Hooper *et al* 2017, p230). This is explored below.

The Environmental Statement (ES) produced through the EIA process in support of an application will display Chapter topics related to all ecosystem services. However EIA "is generally regarded as having a strong biophysical emphasis, often neglecting social impacts" (Dalton *et al* 2015, p865; Morris & Therivel 2009; Hooper & Austen 2013).

[39] EIA is required for larger marine licence applications and a similar processed is followed for those without statutory EIA requirements. The implications of this are included within Chapter 6.

Where social impacts are assessed these tend to limit focus to impacts of workforce, demographics, local services and employment (Morris & Therivel 2009; Blount & Pitchon 2007; Tengberg *et al* 2012). Whilst understandably easier to quantify, model and monitor, these socio-economic receptors remain at the 'economic' end of the spectrum and thus omit the intangible socio-cultural impacts such as wellbeing and spirituality. An example of this relates to the valuation of cultural heritage assets where assessment remains limited to physical structures and features such as shipwrecks, historic ruins and sites of archaeological importance (Dominguez-Tejo 2016, p127) to the detriment of "potential social/cultural interactions between communities and their marine environment" (Ibid, p119). As evidenced within research interviews regarding cultural impact, presented in Chapter 7, there have been attempts to address these issues within Cultural Impact Assessment, Heritage Impact Assessment, Social Impact Assessment etc. processes and guidance. At the project level these additional processes may have utility, or indeed they may be additions to an already complex and burdensome decision-making process. This theme is explored in relation to the main case study in Chapter 7.

The prevalence of (physical) environmental issues within marine regulatory decision-making has been attributed to "statutory agencies [being] unduly cautious and risk-averse due to the fear that any decisions taken over development applications would be subject to Judicial Review prompted by one of the environmental NGOs." (Turner *et al* 2016, p168). Similarly, the burden of proof for marine industry within strategic marine plan creation has been criticised as overly precautionary with fishermen questioning "how do you prove a gear has no impact?" (Caveen *et al* 2015, p86). Specific to marine licensing, criticism has been leveed at the MMO for failure to incorporate evidence-based judgements in its decision-making with marine consents containing "conditions simply to cover any potential environment objections that might be made irrespective of the validity of the claim" (Turner & Essex 2016, p168). This criticism indicates the differing epistemological foundations between marine and terrestrial planning, with the former "founded on scientific evidence and the precautionary principle" and the latter required to "incorporate political influences (such as the 'presumption in favour of sustainable development', housing targets and public involvement)" (Ibid, pp173). This lack of explicit consideration for the political influences at play within marine planning and regulation risks a fall into utopianism and

finds evidence within the Goodwin Sands case study which evidences the denial of local political influences in the consenting landscape.

5.4.3. Experts and Non-Experts – Data Inclusion and Presentation

The data included in marine licence applications and any associated assessments – regardless of statutory EIA requirements – should be understood as part of a subjective decision made by the applicant or consultant working on their behalf. Framing of scientific data presentation is important for conveying information to regulators, statutory advisors and publics. How data is presented thus affects its meaning and transparency:

> "Should an analyst emphasize the number of birds or fish saved as the result of a policy measure or the number that will die in spite (or because) of the measure?... Suppose that a natural disaster has a 1 in 100 chance of occurring each year. One could accurately state that over a 20-year period there is a 1 in 5 chance of such an event occurring" (National Research Council 2005, p212).

Bias in data presentation can therefore be seen as inherent within assessment reports and an acknowledgement that the use of language, particularly technical or statistical terms is important for those conveying impact predictions (Ibid, p214; O'Neil *et al* 2008). Ensuring data is unbiased and communicated in an intelligible way provides meaningful consultation and allows for transparent and accountable decision-making (Chi *et al* 2016, p394). The importance of understanding 'issue framing' in message structures is also useful here (Terkilsen *et al* 1998). The question remains of what information to provide: *what is relevant to the development?* and *what is relevant to stakeholders and publics?*. A more fundamental challenge is the "inherent uncertainty and complexity of environmental issues" (Chi *et al* 2016, p394) and within this scientific uncertainty (biophysical, ecological, hydrological etc) may also be incompatible with the "ethical and political ramifications of the precautionary principle" (Kanie & Haas 2004, p2).

EIA professionals apply a set of "routinized rigorous skills and principles in vibrant professional communities [which] cultivate shared identities through a long period of socialization and training" (Chi *et al* 2016, p396). Institutional cultures and biases prove insightful here. Research conducted into EIA for large infrastructure projects found that some practitioners have insufficient time to prepare assessment documents which "[make] it difficult to conduct a sound investigation" (Ibid, p401). This time-pressure

results in “the work became ‘mechanized’, focusing only on getting the format right without caring much about the accuracy of the data” (Ibid). Whilst guidance produced for, and industry best practise within, specific marine sectors – mostly relevantly for this thesis the aggregates sector – are useful in framing how assessments *should* look (DCLG 2006; Newell & Woodcock 2013), there is a risk of overreliance on ‘pro forma’ and reuse of previous assessments as templates for current report drafting. Likewise, the EIA literature attempts to address these debates, and this is acknowledged that within scholastic EIA as a discipline appears very different from that seen in practice (Johnson 2015; Gonzalez *et al* 2015; Chi *et al* 2016; Gazzola & Onyango 2018). For example, it is acknowledged in the literature that no ‘unified theory’ for EIA exists, but rather a set of ‘disparate sub- disciplines’; a point clearly evidenced within the multiple sub-disciplines featured within the academic journal *Environmental Impact Assessment Review* (Johnson 2015). The academic/practice divide appears evident here, and indeed, given the limited resources available to undertake EIA in practice, it is perhaps understandable, although certainly not desirable, that practitioner time focused on Continual Professional Development, and upskilling in line with academic advances, is limited.

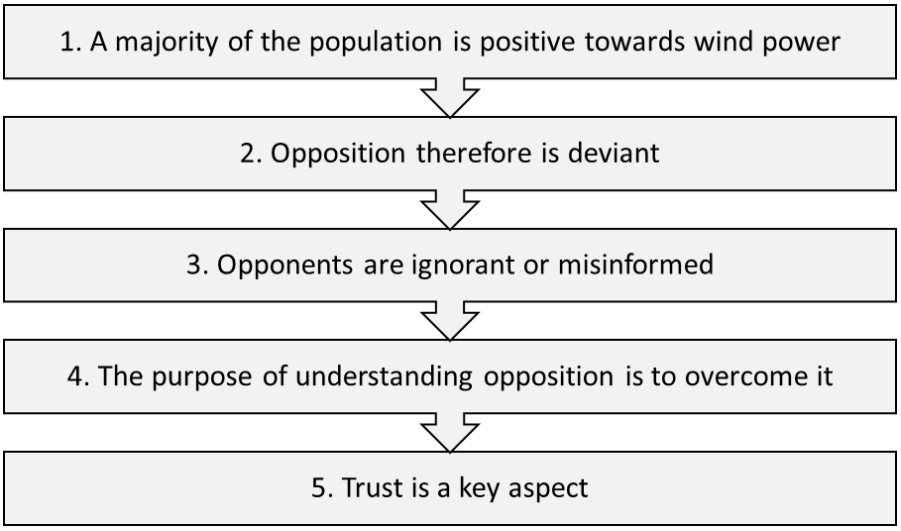
Overall, these reflections from EIA experts are worrying. If experts feel rushed and unsure of the validity of their assessments, how can public consultees trust the process?

There are several interrelated issues here. Firstly, the quality of the data provided for public consumption requires consideration. Are reports drafted to be clear and unambiguous – and accessible to a variety of audiences – or hurriedly produced to meet deadlines? Secondly, the data selected for inclusion in assessment reports requires additional thought. Are professionals following ‘pro-forma’ templates based on generic applications and including only data from ‘the usual’ sources[40], or is time and care taken to ensure that local and novel sources of verifiable data are included? Simply put, the question becomes how and why is it important to include non-expert (public) representations and opinions in marine development assessment and

[40] Those advisors and data sources which feature in the majority of previous assessments. Professional rapport and networks could also be a factor here.

decision-making, and how and whose voice should be included? This question is explored in the remainder of this section utilising the offshore wind MSP literature due to this sector's prevalence within research which focuses on marine development regulation[41].

Offshore wind research proves valuable when considering how the views of non-experts are included within development assessment and consenting. This research appears founded on the five assumptions shown in Figure 5.7.



Waldo 2012; Aitkin 2010

Figure 5.7 Planning Researches Five Assumptions of Offshore Wind

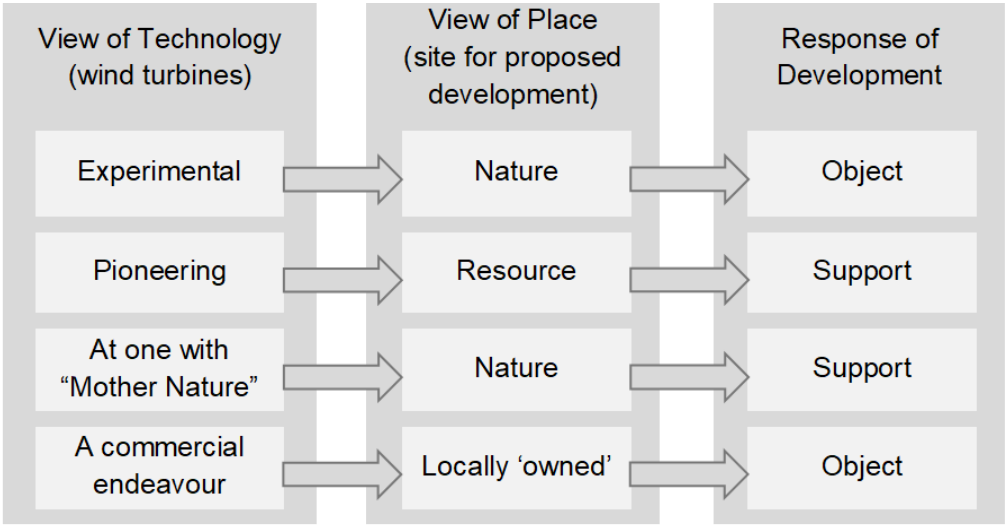
These assumptions, coupled with the reflections of the process made by the experts within Chi ***et al's*** (2016) research, do little to increase trust in the assessment process. If opposition is seen as deviant (stage 2 in Figure 5.7) then the purpose of a hurried EIA and development consent application is to undermine opposition in as undemanding a way as possible. But from where do these assumptions derive?

[41] Whilst offshore wind literature is utilised to consider development impacts and public perceptions of marine development, it should be noted that the consenting for large scale (over 100MW) offshore wind farms falls outside of the remit of MCAA2009 and therefore the process of consenting is not considered within this current research.

The early years of renewable energy development assumed wide public acceptance due to the high level of support expressed in public surveys (Bonar *et al* 2014, p487). However, wind technology itself has an array of meanings – or imaginaries (Davoudi 2018) – attributed to it, with turbines seen as representing, for example, "'stewardship', 'ugly technology', 'responsible energy policy', 'destroying landscape', 'progress' and 'harking back to the past'." (McLachlan 2009, p5343; Stokes *et al* 2014). Local communities protesting – being deviant – against large scale developments have been stereotyped as NIMBYs (Not In my Back Yard) and historically been seen as motivated by "individualist self-interest" (Eranti 2017, p286). Negative associations of offshore wind also focus on aesthetic and non-market impacts such as wellbeing, spirituality for local communities and market impacts of tourism, and property value (Dalton *et al* 2015, p863; Waldo 2012; see Falconer *et al* 2013 for a similar study into aquaculture perceptions).

Engagement with local stakeholders, and accounting for local perceptions and values, is central to both understanding and challenging these associations. But this is not simply a case of accepting lay – non-expert, public – opinion as fact because "laypeople may not always recognised their inaptitude for making truly informed claim evaluations" (Scharrer *et al* 2014, p465). The skills of consultants and planners should be given adequate credit here and again the resource intensity of fully utilising these skills cannot be restricted if meaningful assessment and consultation is desired. Acknowledging and mediating between multiple categories of knowledge claims thus becomes a critical judgement for assessors and regulators such that expert and lay knowledge categories can also be supplemented with "institutional knowledge claims" and "expert planner knowledge claims" (Lee 2017, p4). It is important therefore to acknowledge both where knowledge claims originate, and consider their validity within these categories.

Aesthetic impacts may dominate lay debate regarding offshore renewables, however in addition to these, and other "proximity dependent impacts", perceived impacts of these developments can lead to 'place-protective action' in which "changes to a place threaten to disrupt emotional attachments and aspects of identity" (Stokes *et al* 2014, p65). These attachments include consideration of the relationship between individual opinions of the symbolic nature of technology and of the place impacted. Examples of this are shown in Figure 5.8.



McLachlan 2009, p5348

Figure 5.8 Symbolic Logics for Opposition and Support for Wind Farms

Opposition can therefore reflect more than direct opposition to the siting of a development in a particular place but also "personal beliefs about the environment and society as a whole" (Bonar *et al* 2015, p491).

These debates within offshore wind consenting also highlight other conflict types which occur between stakeholder groups including 'local versus global' issues and 'green on green' conflicts[42], with the former also evident in the latter. While local opposition bases concerns on local identity, recreation and tourism impacts – as well as emotional attachment to a place – these are situated within wider policy and developmental concerns, operating at national or global scales, such as renewable energy policy, climate change and the commodification or industrialisation of nature (McLachlan 2009, p5345; Ladenburg 2010; Haggett 2011; Bonar *et al* 2015; Murno *et al* 2017). This is exactly why minimising rushed or opposition-resolution motivated assessment is of paramount importance. Ensuring that local stakeholder concerns are not dismissed as 'deviant' is crucial here. Instead those that do object - vocally or otherwise

[42] The concern here is, for example, that "society has gone green (at least in its rhetoric), but what kind of greenness do we want?" (Warren *et al* 2011, p854; Bonar *et al* 2015, p491).

– would more helpfully be seen as opposing development “on the basis of detailed knowledge of their area, the development, and the issue more generally” (Haggett 2011, p504). Likewise dismissing non-local objectors is also unhelpful. Non-local objectors can provide useful perspectives and data for assessment and consent deliberations, for example “tourists are found to be more negative compared to the local residents, because they want to enjoy unspoiled nature” (Ladenburg 2010, p1298; cf Nimmo *et al* 2011; Schliephack & Dickinson 2017).

What does this mean for EIA professionals in the selection of data for the preparation of applications and Environmental Statements? If publicness is to be meaningfully considered within the consenting process then “both local and non-local engagement … remain important in the pursuit of public values to support marine and coastal planning” (Munro *et al* 2017, p19; Tonin & Lucaroni 2017). Consideration of offshore wind case studies evidences the need for reflexivity within the public consultation campaigns undertaken by developers at all stages of consenting[43]. Awkward consultation mistakes highlight this need. In one example of this, for an offshore wind proposal in Wales, national developers and southern English consultants “were perceived by local people to have little knowledge or experience of the local situation” (Haggett 2011, p507). In this case “producing brochures about the development in Welsh as well as English was felt to be a public relations gimmick rather than an indication of a local character to the proposal, or any understanding of the local area” (Ibid). The motivations behind consultation mishaps such as this cannot necessarily be concluded as being of ill-intent towards the public in question. An alternative view of the Welsh language brochure production could be the expression of the planning consultants attempt at evoking the values and interests of the community affected (Uitermark & Nicholls 2017, p38). Trust in consultant and developer motivations becomes again key to meaningful dialogue.

The importance of including – or at least acknowledging – public views within development assessment and the determination of consent decision appears from the above to be an additional task on top of undertaking EIA with more bio-physical focus.

[43] The stages of consenting are defined as: Pre-application, Application, and Post-consent condition discharge.

Indeed, it is often seen as futile to include the “emotion, misinformation, and self-interest” of local publics (Innes & Booher 2015, p200; Eranti 2017). However this need not be the case. Consideration of impacts to CES can be a benefit rather than an additional burden. As CES are “directly experienced and intuitively appreciated by people” (Plieninger *et al* 2013, p127) it is within this category of services where stakeholder (public) objection is most immediately felt. However, due to their complex, holistic and interrelated nature “cultural services are enjoyed in ‘bundles’ and can thus foster the orientation of ecosystem services management towards multi-functionality” (Ibid; see also Elliott *et al* 2018 for evidence of this in relation to health benefits gained from coastal visits). In other words, protecting CES will, in turn, protect ecosystem services and thus the ecosystem more widely. Engaging with local publics is therefore valuable because “lay knowledge is more holistic, though less precise, and it can give the ‘feel’ of a situation” (Innes & Booher 2015, p201). This supports assumption 5 in Figure 5.7 that trust is the key aspect to overcoming opposition, and helps to form more supportive symbolic logics based on those presented in Figure 5.8, particularly in relation to logics of place which see marine development spaces as locally owned.

Similarly, the “concerted effort… made in recent years to allow datasets held in the public domain to become available as Open Source” (Rumson & Hallett 2018, p135) allows for increased public ownership of assessment decision-making along with increased transparency. Where data has been collected at a local level – albeit for regional marine spatial planning rather than development consent – the resultant mapping has clearly shown where data gaps exist (Shucksmith *et al* 2014, p6). Overall, the literature points to the need to “generate knowledge on human perceptions of marine ecosystems, and integrate it in marine resources management” (Dominguez-Tejo *et al* 2016, p39).

Being mindful of symbolic logics which differ from the majority view, or seem deviant from presupposed assumptions regarding public perception, is of crucial importance here. For meaningful consultation within marine licensing, care is also needed to ensure that consultation material, and application assessments themselves, are accessible to wide audiences of non-expert stakeholders. Ensuring that decisions are fair, transparent and accountable implies the need for a process in which value judgements are not applied to factual statements. But CES evade factual, quantifiable,

measurement and are inherently subjective in nature, rendering this intention logically impossible.

5.5. Marine Licensable Activities

The previous two sections have explored decision making processes and the assessment of impacts. Relating these secondary research findings to the case examples and case study marine licence applications considered within this thesis requires additional consideration of the types of development that these processes are applied to. This section therefore identifies the types of development licenced under MCAA2009 and those excluded from this requirement, or consented through different means. After defining 'marine licensable activities' in this introductory sub-section, the findings of the quantitative marine licensing data analysis related to licensable activity are presented.

Publicly accessible web guidance produced by the MMO provides "six categories of activity that may need a licence" (MMO 2018b) which are displayed in Figure 5.9.

Construction, alteration or improvement of works
Dredging
Deposits of any substance or object
Incineration of any substance or object
Removal of any substance of object
Scuttling of any vessel or floating container

MMO 2018b

Figure 5.9 Six Categories of Activity that May Need a Marine Licence

The MMO's regulatory remit is defined as the "English inshore and offshore areas and… Northern Ireland offshore areas" (Ibid). 'Inshore area' is defined as "any area which is submerged at mean high water spring tide up to the territorial limit" and 'offshore area' is defined as "waters beyond the territorial limit in so far as they comprise the exclusive economic zone" (Ibid). No nautical mile delineation boundaries are provided. The six categories of activity simplify the complex list of marine activities

which are licensable under MCAA2009. (MMO 2018b). Compiling a comprehensive list of these activities involved reviewing online MMO guidance cross-referenced to the relevant sections within MCAA2009. The results of this exercise are presented in Figure 5.10.

MCAA 2009 Section	Activity	Details	Notes
66(1)1-3	Deposits of any substance or object (in the sea or on or under the sea bed) (from a vehicle, vessel, aircraft, marine structure or floating container to remove any substance or object from the sea bed)	Disposal of inert waste	OSPAR applies
		Disposal of fish waste	
		Disposal of dredged material Markers and buoys Burials at sea	OSPAR applies Exemptions apply
		Scientific instruments	Exemptions apply
		Tracers Deposits of marine growth	Exemptions apply Incl. hull washing. Removal from marine structures included under 'construction/maintenance'
66(1)4-6	Scuttling of any vessel or floating container	Reef creation	
		Other scuttling	
66(1)7	Construction, Alteration or Improvement (in or over the sea, on or under the sea bed)	Wind farms	Under 100MW generating capacity
		Wet renewables	
		Sea walls	
		Jetties/pontoons	Over 30m2
		Bridges Ports	Over tidal rivers Harbour Order may apply
		Cables Pipelines	For stretch of cable in territorial sea only. MMO must grant licence, but conditions may be applied
		Aquaculture	
		Scaffolding	
		Maintenance of structures	Incl. sand blasting, re-painting, resurfacing. Exemptions apply
66(1)8	Removal of any substance or object (using a vehicle, vessel, aircraft, marine structure or floating container to remove any substance or object from the sea bed)	Wrecks and Archaeological Remains	
		Materials from wrecks	Exemptions apply
		Washing slipways	Exemptions apply
		Boreholes	Exemptions apply
		Trial pits	Exemptions apply
		Grab samples	Exemptions apply
		Decommissioning	Removal of piles, etc., Exemptions apply
		Litter, seaweed and dead animals	Exemptions apply
66(1)9	Dredging	Navigational – Capital	
		Navigational – Maintenance	
		Aggregate dredging	Incl. construction aggregate, beach recharge, land reclamation
		Clearance dredging	i.e. clearing outfalls
		Beach maintenance	
66(1)10-13	Incineration of any substance or object	Incineration Loading of any substance or object for incineration at sea	Incl. UXO clearance

MMO2018b

Figure 5.10 Licensable Marine Activities

Marine licence exemptions apply to 38 development activities. These 'exempted activities' are grouped into three categories dependent on the level of notification

and/or approval needed prior to undertaking the activity. Exemptions are given through The Marine Licensing (Exempted Activities) Order 2011 (HM Government 2011g) and The Marine Licensing (Exempted Activities) (Amendment) Order 2013 (HM Government 2013). These Orders along with MMO online guidance were analysed to create a comprehensive list of exempted marine activities which is presented in Appendix 5D. The majority of exemptions apply to small-scale works with minimal, if any, impact to the marine environment. Others include emergency works in response to environmentally damaging, or dangerous occurrences such as chemical or oil spills or flood damage or risk. Of note here is the complexity of the exemptions table and the nuances between the levels of notification needed for specific activities. The utility of this legislation is also questionable with it seeming pragmatically unlikely that, in the face of environmental disaster, developers would pause to consider the notifications needed to conduct repair or clean-up work.

Taking together, Figure 5.10 and the exemption list in Appendix 5D evidence the variety and complexity of both marine development activities and their legislative requirements. Limiting the focus of this thesis purely to those activities consented under MCAA2009 – and thus excluding offshore wind construction above 100MW generating capacity and Oil and Gas activities – allows for the marine licensing process undertaken by the MMO within the English marine area to be explored in depth and in isolation from the complexity of this multiple development consenting regime.

5.6. Quantitative Marine Licensing Analysis

This section presents the findings of the quantitative marine licensing data analysis, described in Chapter 4, for marine licences and activities determined within the English marine area. This analysis provides a statistical overview of the marine licensing process in relation to the types and quantity of development which has been consented within English seas since the introduction of the MCAA2009 regime. Quantitative analysis of this data also tests the claims made by the MMO regarding to their efficacy in determining marine licences, and illustrates areas in which the claims of transparency within the system can be critiqued.

To commence this analysis the complete data table of licenced marine activities was sorted by year to establish the number of development *applications* and *activities* applied for between the vesting of the MMO in 2010 and December 2017 (eight years). This is presented in Figure 5.11.

Year	Marine licence applications (activities)	Fast Track (activities)	**TOTAL ACTIVITIES**	Marine licence applications	Fast Track applications	**TOTAL APPLICATIONS**	Average number of activities per application (ML)	Average number of activities per application (FT)	Average number of activities per application (TOTAL)
2010	103		**103**	37		**37**	2.78		**2.78**
2011	448		**448**	251		**251**	1.78		**1.78**
2012	760		**760**	438		**438**	1.74		**1.74**
2013	770		**770**	400		**400**	1.93		**1.93**
2014	900	71	**971**	452	52	**504**	1.99	1.37	**1.93**
2015	654	172	**826**	307	113	**420**	2.13	1.52	**1.97**
2016	806	163	**969**	315	123	**438**	2.56	1.33	**2.21**
2017	685	271	**956**	277	162	**439**	2.47	1.67	**2.18**
Total	**5126**	**677**	**5803**	**2477**	**450**	**2927**	**2.17**	**1.47**	**2.06**

Figure 5.11 Marine Licence Applications versus Marine Licensable Activities 2010-2017

Trends in the relationship between *marine licences* and *marine licensable activities* illustrate how one marine licence usually contains more than one activity, and these findings are presented as Figures 5.12 and 5.13. The 'fast-track' activity categories refer to the simplified decision-making process introduced in 2014 to process low risk applications.

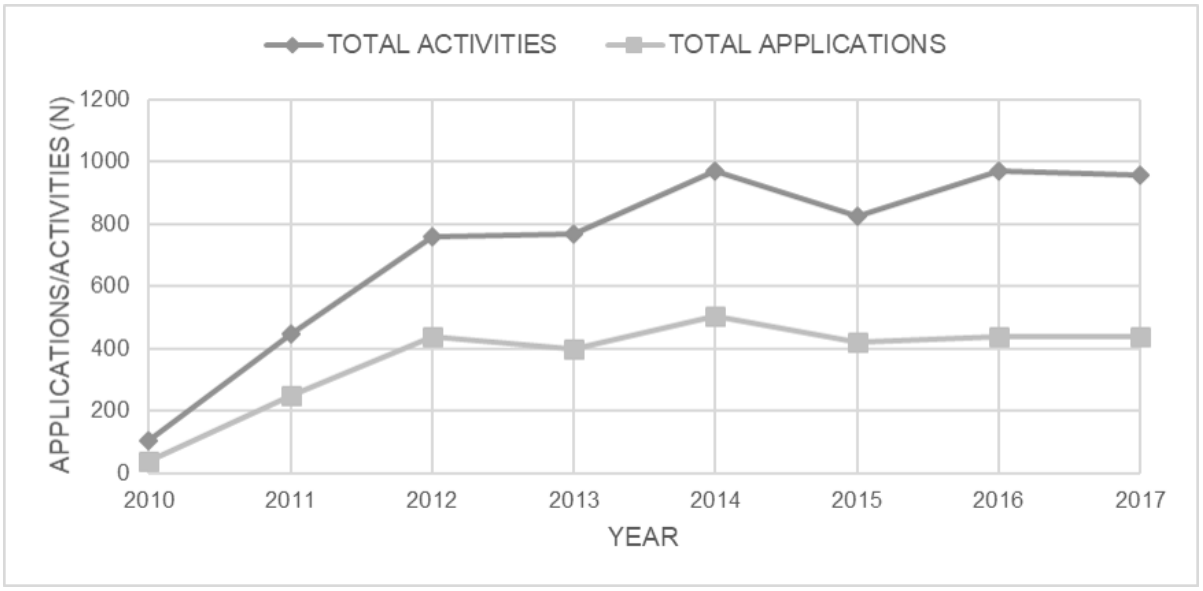
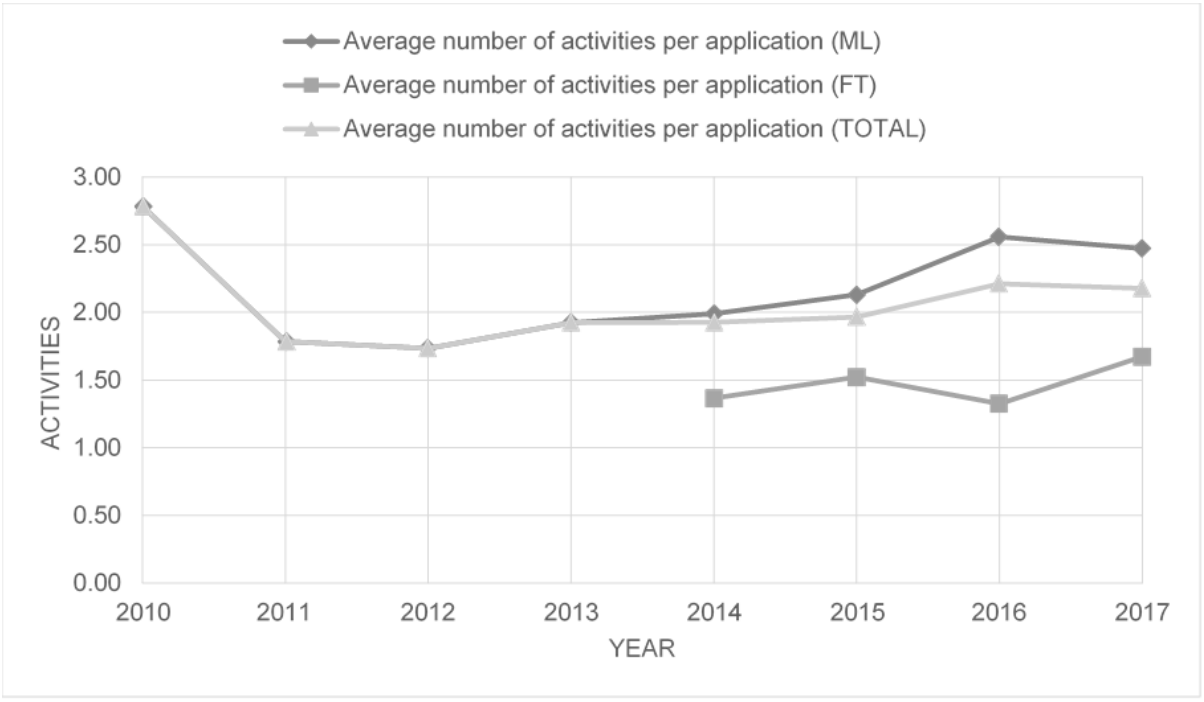


Figure 5.12 Marine Licences versus Marine Licensable Activities



Key: ML = Marine Licence; FT = Fast Track Marine Licence

Figure 5.13 Activities per licence application (average)

As each marine licence application is likely to have multiple activities associated with it, analysis of the data based on application type was deemed too onerous because considering the data in this way resulted in an unmanageable number of variants in

terms of application[44]. Undertaking this analysis based on marine licence *activities* rather than *applications* provides an illustration of the complexity of marine development within English seas and facilitated the selection of a representative sample of case examples for analysis as discussed in Chapter 6. The complexity of marine licensable activities is evidenced in Figure 5.14 which presents the licensable activities within marine licences determined between 2010 and 2017 inclusive.

[44] For example a marine licence for a port project could be defined in the data as 'construction', 'construction, maintenance dredge' or 'construction, maintenance dredge, disposal'. To further complicate this analysis the activities categories have been subject to amended by the MMO as operation of the marine licensing process developed. For example 'Construction' and 'Construction of New Works' are listed separately and appear to have been combined into one category in 2015. Simplifying the marine licence data would involve viewing each of the 2927 applications separately and artificially manipulating the data to select the 'most relevant' activity type which would introduce bias and subjectivity to the analysis. Finally, a licensing decision is made for each activity rather than the application holistically – although the two are intrinsically linked – and as such the process of simplifying the data was deemed unnecessary for the purpose of this analyses.

Activity	2010	2011	2012	2013	2014	2015	2016	2017	Total
Maintenance of existing works	1	3	5	15	201	178	275	259	**937**
Construction	16	175	260	261	125				**837**
Construction of new works	7	5	28	43	149	156	179	165	**732**
Removals (Inc. Grab Samples)		64	169	72	31				**336**
Disposal of dredged material		24	30	41	58	61	66	47	**327**
Maintenance of existing works (Fast Track (FT))					38	78	83	117	**316**
Navigational dredging (maintenance)		20	24	58	57	52	49	13	**273**
Other removals	1	1	5	9	46	46	59	37	**204**
Other works		1	2	2	28	31	29	56	**149**
Aggregate dredging	2	10	47	45	13	11	3	2	**133**
Dredging	10	20	39	43	14	2			**128**
Dredged Material Disposal (Disposal Site)	28	32	38	18	5				**121**
Other deposits	1	9	3		26	17	33	27	**116**
Sampling	2	2	14	33	15	14	11	19	**110**
Dredged Material Disposal (Source Site)	33	37	20	6	3	1			**100**
Other removals (FT)					1	9	16	65	**91**
Emergency Work			24	19	47				**90**
Alternative Use of Dredged Material		10	8	16	6	7	40	2	**89**
Navigational dredging (capital)	1	13	6	15	10	19	11	10	**85**
Decommissioning of works				1	14	22	18	19	**74**
Construction of new works (FT)					6	34	23	5	**68**
Other works (FT)					10	26	11	19	**66**
Burial at Sea		6	4	9	8	11	8	12	**58**
Miscellaneous Disposal		7	15	25	11				**58**
Other dredging			4	1	12	16	13	7	**53**
Sampling (FT)					2	3	9	39	**53**
Renewables	1	8	14	7	7				**37**
Use of tracers				31	2	3			**36**
Other dredging (FT)					7	5	2	16	**30**
Wrecks and other archaeological remains		1	1		9	4	5	3	**23**
Other deposits (FT)					2	8	6	3	**19**
Clean-up dredging					3	1	2	4	**10**
Burial at Sea (FT)					1	2	2	4	**9**
Navigational dredging (maintenance) (FT)					2	1	5		**8**
Incineration of any substance or object at sea							4	3	**7**
Disposal of dredged material (FT)						2	3		**5**
Scientific instruments (FT)						2	1	1	**4**
Alternative Use of Dredged Material (FT)					1		1		**2**
Explosive substances or articles						1	1		**2**
Use of tracers (FT)						2			**2**
Wrecks and other archaeological remains (FT)					1			1	**2**
Clean-up dredging (FT)							1		**1**
Decommissioning of works (FT)								1	**1**
Scientific instruments						1			**1**
TOTAL	**103**	**448**	**760**	**770**	**971**	**826**	**969**	**956**	**5803**

Figure 5.14 Marine Licensable Activity Categories 2010-2017

Combining the detailed data from Figure 5.14 with the MCAA2009 defined licensable activity categories (Figure 5.10) presents a clearer picture of the types of activities licenced for development within English waters. This is presented in Figure 5.15 with the addition of an ‘unable to define’ category which accounts for the licences determined for works stated as ‘other works’ or ‘emergency works’.

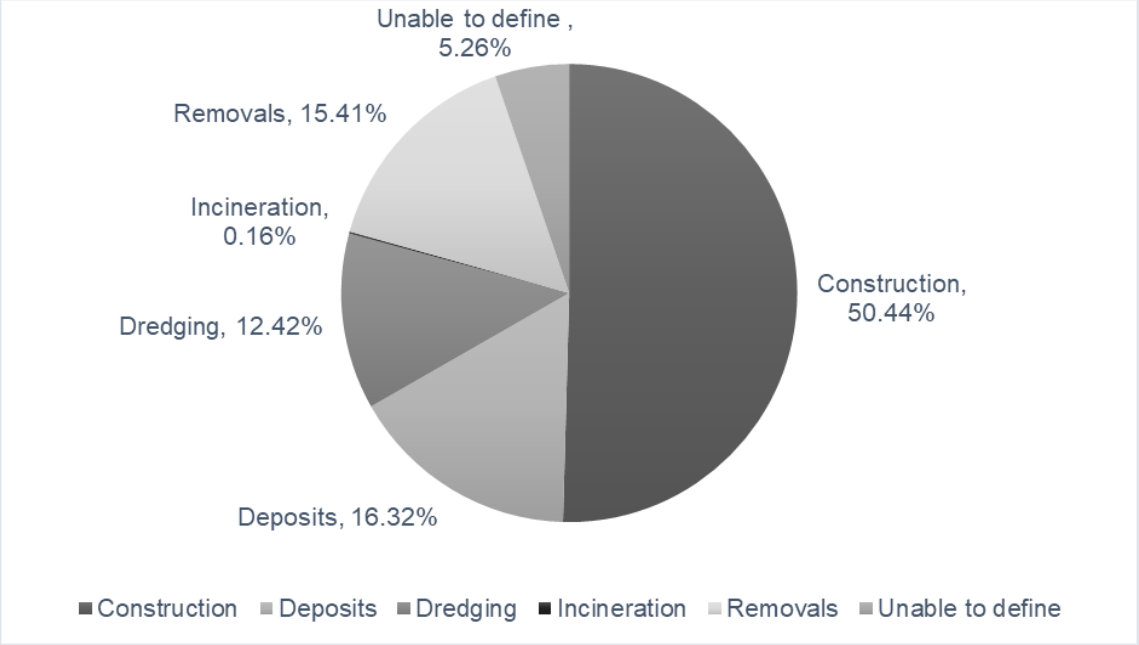


Figure 5.15 Marine licences (2010-2017) within MCAA2009 Licensable Activity Categories

From this, it is clear that marine construction activities account for over half (50.44%) of marine licensable activities undertaken in English Seas. Marine deposits, removals and dredging account for a total of 44.15% of licenced activities. These findings are utilised in Chapter 6 to validate claims of representation within the marine licence application case examples sample.

5.7. Chapter Conclusion

This Chapter has presented research findings and details of the analysis of legislative and policy documents relevant to the marine licencing process, in relation to its governance framework. The complexity of this process is clear from this analysis, can either be considered as *allowing flexibility* within the process in order to determine marine licence applications for a wide array of activities licensable under MCAA2009, or as *lacking in clarity* in relation to the decisions being made and who is involved within the process.

The analysis of licensable marine activities combined with the quantitative marine licensing data analysis have further expose the complexity of the marine licensing regime. Taken holistically, this Chapter has shown the policy and legislation through which the marine licensing system operates, the marine development activities for which a marine licence is required, and given a quantitative account of the scale of marine development as consented under this regime. These are important areas to understand in order to contextualise discussions regarding the publicness of marine licence decision-making and the relationship between decision-making and the publicness of the sea.

The rational decision-making models discussed in Section 5.3 combine with the legal frameworks and policy context to structure the decision-making process and as such they provide framing for the 'decision problem' (Seip & Wenstop 2006). In other words, when a marine licensing decision is made, it must be made in accordance with these legal clauses and policy stipulations in mind, and ideally complying with EIA best practice, however defined. The extent to which these frameworks have been subject to public engagement and scrutiny, then, directly affects the publicness of decisions made within this system. The implications of this conclusion are discussed in Chapter 9.

Chapter 6. Marine Licensing Process and Case Examples

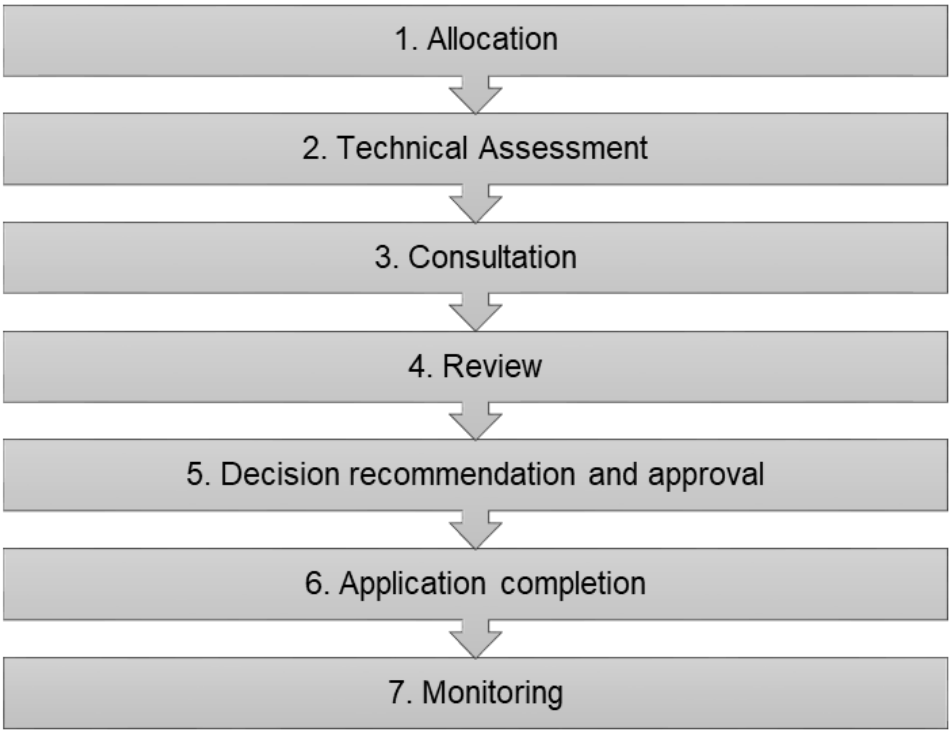
6.1. Relating Process to Policy using Case Examples

This chapter presents the qualitative analysis of marine licensing case examples in order to assess the clarity of the determination process for these applications. The analysis findings provide the context within which the main Goodwin Sands case study marine application is situated in policy and process terms. As such, this chapter continues the analysis from the previous chapter regarding licensable marine activities by analysing the process through which licence determination is made, and therefore provides a response to the research question RQ2 *How public are the marine development governance frameworks and decision-making processes?,* and specifically RQ2.2a '*What is the marine development decision-making process?*'

In the sections that follow, the MMO's marine licence guidance is outlined before presenting the findings of the case example analysis. The findings presented here test the MMO's claim of "promoting transparency in [its] decision-making" (MMO 2014a, p1). The analysis focuses on considering *for whom* this transparency is intended. Additional MMO process improvement aims include "reducing regulatory burden" and "improving the customer experience" with the latter evidenced as improving due to "improved marine licensing performance statistic" in relation to the time taken for the MMO to determine licences (Ibid). In addition to the analysis of secondary source data this chapter also presents the findings from interview data in relation to the marine licensing regulators perspective of the consenting process.

6.2. Determination Stages and Timeline

The MMO's publicly accessible online 'marine licensing guidance for applicants' provides varying levels of detail on the determination process (MMO 2018a, 2018c, 2018d). A timeline is provided which separates the process into seven stages, as shown in Figure 6.1, which appears as the implementation of the earlier EFRA Committees' statement that decision-making flowcharts would only be made by those implementing the process (HM Government 2011a).



MMO 2018d

Figure 6.1 Marine Licence Application Timeline

These stages act as a framework to explore the process through to the presentation of case examples findings below.[45]

6.2.1. Allocation

The allocation stage is undertaken once an application has been submitted and 'validates' submissions with regards to their marine licence requirements, the suitability of any supporting documentation and information, and the receipt of appropriate fee or agreement to invoicing terms (MMO 2018a; 2018d). All 'fast track' (latterly renamed 'self-service') applications are attributed to the lowest fee band (Band 1) as these

[45] This application timeline excludes pre-application advice which the MMO "strongly encourage" applicants to seek prior to submitting an application (MMO 2018a). This can include enquiries, EIA screening and/or scoping opinions and requests, Environmental Statement (ES) reviews, and sample plan or sediment analysis requests (Ibid; 2018c). This research limits its focus to the marine licensing decision-making process and therefore both the pre-application stage and monitoring stage are not considered within this thesis.

activities are deemed of low risk to marine receptors. Band 2 projects are sub-categorised in relation to project cost as illustrated in Figure 6.2.[46]

Band	Project cost	Fee (prior to 7 January 2019)
1	Fast Track/Self Service	£50 paid in full in advance
2a	£0 to £4,999 (and emergency work)	£450 paid in full in advance
2b	£5,000 to £19,999	£700 paid in full in advance
2c	£20,000 to £49,999	£1,400 (maximum) invoiced in arrears
2d	£50,000 to £199,999	£2,200 (maximum) invoiced in arrears
2e	£200,000 to £999,999	£2,700 (maximum) invoiced in arrears
3	£1,000,000+ (and complex cases)	Hourly rate

MMO 2019c

Figure 6.2 Marine licence Fee Bands

All applications with a total project cost of over £1,000,000 are included within Band 3. Band 3 also contains any Band 2 application deemed to have 'complex characteristics' (MMO 2019c). The data was unable to provide details of these because project cost, rather than fee band, was provided within the dataset. Blank dataset entries were attributed to Band 1 if they were marked as 'fast track' and Band 3 if they were not. The rationale here was that any application could be charged at an hourly rate and so the impact of ascribing these blank entries to 'Band 3' had very minimal impact on overall data validity. Blank dataset entries accounted for 4% of all entries. Whilst this is numerically small, the Band 3 projects' value and complexity implies that this 4% does not relate to 4% of determination activity.

The quantitative analysis undertaken for this thesis demonstrates that half of marine licence applications fall within the overarching Band 2 category, with the largest volume of cases per fee band being the smaller low risk applications (Band 1 = 30%). These findings are presented in Figure 6.3.

[46] In an update to the guidance provided by the MMO regarding marine licence fees Band 2 has been simplified from the five to two sub-bands (MMO 2019c). This simplification is not considered within this analysis as case examples were allocated fee bands within the previous model.

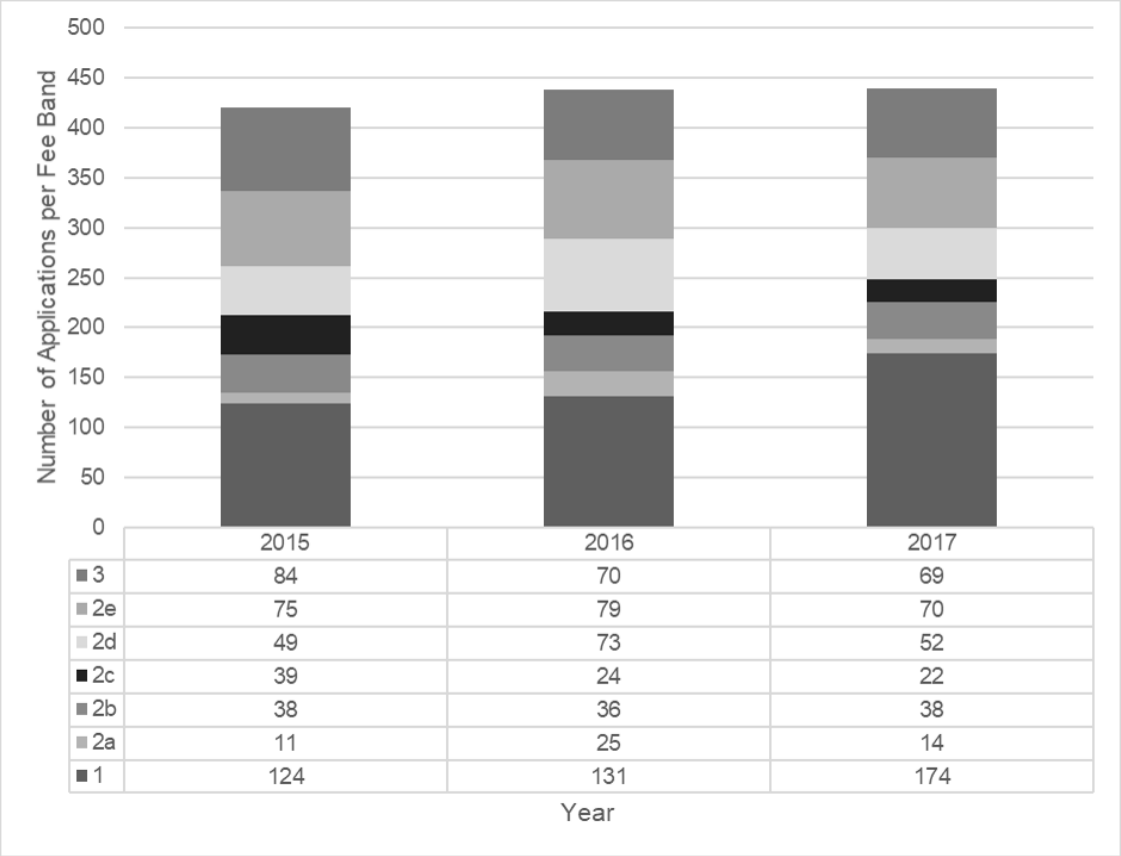


Figure 6.3 Fee Bands 2015-2017 (Based on Project Cost)

Once an application is validated it is "allocated to a case officer and case manager who inform the applicant that their application is being processed" (MMO 2018d). The allocation of an application starts the count-down to the 13 week target for making a decision on the application (MMO 2018a; 2018d).

6.2.2. Technical Assessment

Following allocation, applications undergo "technical assessment of application particulars" (MMO 2018d), which may include a suite of additional assessment requirements under either specific parts of MCAA2009 or alternative legislative processes. These are presented in Figure 6.4 along with additional consents which applicants may need to secure prior to commencement of consented development. It is the responsibility of the applicant to provide "sufficient information" for the MMO to assess applications (MMO 2018a).

Assessment/Consent	Legislation at March 2019 (Earlier legislation not included)	Criteria/Reason	Decision maker and/or Consultee
Environmental Impact Assessment (EIA)	Environmental Impact Assessment Directive; The Marine Works (Environmental Impact Assessment) (Amended) Regulations 2017 (MWR)	"if a project is likely to have significant effect on the environment" (MMO 2018c) or within Annex I or II of Schedule 1 of MWR	MMO consent in consultation with "primary and technical advisors" (MMO 2018c)
Habitats Regulation Assessment (HRA)	The Conservation of Offshore Marine Habitats and Species Regulations 2017	"if it is likely that your project will have significant effect on a European site" (MMO 2018c) Natura 2008 sites or Ramsar sites	MMO consent
Marine Conservation Zone (MCZ) Assessment	Marine and Coastal Access Act 2009	Activities "within or near" an MCZ	MMO consent
Water Framework Directive (WFD) Assessment	The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017	"activities in the marine environment up to 1 nautical mile out to sea" (EA 2017)	MMO consent following advice from Environment Agency as competent authority
Waste Framework Assessment (WaFD)	The Waste (England and Wales) Regulations 2011	Any activity generating waste	MMO consent utilising the waste hierarchy (prevention, re-use, recycling, other recovery, disposal at sea) (MMO 2018c)
Site of Special Scientific Interest (SSSI) Consent	Wildlife and Countryside Act 1981 (as amended)	Activities within SSSI's	Natural England consent
Planning Permission	Relevant terrestrial legislation; NPPF (MHCLG 2019)	Activities above MLWS	Local authority permission
Environmental Permit	The Environmental Permitting (England and Wales) Regulations 2016	Water discharge	Environment Agency consent
Harbour Order	Harbours Act 1964	Related to some Ports and Harbour development	MMO consent
Section 36 Consent	Electricity Act 1989	Relates to the construction, extension or operation of any offshore generating station <100MW	MMO consent
Safety Zone Application	Energy Act 2004; Marine & Coastguard Agency Guidance	Relates to offshore renewable energy generating stations	MMO consent in consultation with MCA
Crown Estate Consent	Crown Estate Act 1961	"Activities which physically interact with the seabed" (The Crown Estate 2019) – level of consent depends on distance to land and activity	The Crown Estate

Figure 6.4 Additional Assessments and Consents for Marine Licence Applications

Within the online guidance, the 'technical assessment' stage of the determination timeline is stated as including the provision of "estimate timescales for approval". This is provided by the MMO prior to the application being considered for consultation and

therefore appears to be a ‘blind’ estimate based on a cursory review of the application detail without consideration of detailed local concerns or advisor input (MMO 2018d).

6.2.3. Consultation

Following the technical assessment stage, marine licence applications are advertised, and a consultation exercise undertaken, as deemed necessary. The consultation period varies “typically” from four weeks to six weeks depending on EIA requirements (MMO 2018d). MCAA2009 does not specify statutory consultees for marine licence applications. Early marine licensing guidance provides details of *primary advisors* that the MMO “will commonly consult […] on marine licence applications because of their knowledge and expertise and in some cases to satisfy requirements set out in other legislation” (Defra 2011a, p16). The term ‘primary advisor’ is replaced with ‘interested parties’ in more recent marine licensing guidance. These interested parties are now stated as including “other public authorities and agencies” (MMO 2018a). The guidance continues with the assertion that “we [the MMO] will often consult the public too” (Ibid). Organisation names are absent from the 2018 guidance, with the 2011 guidance instead providing the most detailed definition of marine licence application consultees. This is recreated and expanded in Figure 6.5.

Consultee	Remit/Advice sought
Cefas	Marine science expertise
Joint Nature Conservation Committee	Offshore nature conservation >12nm
Natural England	Inshore nature conservation <12nm
Environment Agency	Coastal and flood defence; Environmental Permitting; Water Framework Directive
Maritime & Coastguard Agency	Navigational safety
Ministry of Defence	Military issues
Historic England	Historic/cultural heritage
The Crown Estate	Seabed ownership/consenting
Relevant Local Authority	Terrestrial overlap
Public	Public comments

Defra 2011a; 2018a; 2018d

Figure 6.5 The MMO’s Primary Advisors

Details of advertising requirements are scant within the 2018 guidance. The guidance states that, if consultation is necessary, then the applicant may be required "to place notices in national and local publications [and] more than one advert may be needed if an application is to be advertised under more than one piece of legislation or regulations" (MMO 2018a). Details on how the MMO assesses the merits of consultation responses are vague, with the guidance stating that "the case officer gathers information from consultees and the public" (MMO 2018d). This is expanded to state that "as responses are received, if the case officer considers that there is insufficient information to continue assessment or if new issues are identified, further consultation with the applicant and advisers may be required" (Ibid). The guidance also states that, at this stage, an application can be "put *on hold* pending receipt of further information or the application may be rejected [and] in exceptional circumstances a case may be placed on hold indefinitely" (Ibid, emphasis added). It is not clear why this 'hold' option is utilised rather than rejected or refused consent.

Due to the limited details regarding the consultation process available within published guidance documents, this area will be considered more fully as part of the case example analysis presented in Section 7.3.

6.2.4. Review

After consultation, a marine licence enters the 'review' stage in which all public and consultee responses are "evaluated and recorded" (MMO 2018d). Conclusions are reached on the assessments commenced within the 'technical review' stage prior to consultation, and "a decision document is prepared if required" (Ibid). There are no details regarding criteria which necessitate the preparation of a decision document nor on how assessment conclusions are reached. At this stage the applicant also receives a draft marine licence and is given the opportunity "to clarify any misunderstanding if required" (Ibid). The overarching 'make a marine licence application' guidance does expand on the decision-making processes which occur within this stage to a small degree as stated in the following extended quotation from the 2018 guidance:

> "We base our decisions on the *best available evidence*, but this information is rarely perfect. There may be a potential impact risk, but scientific uncertainty about exactly what this might be. The *precautionary principle* is applied when making licensing decisions in such circumstances *and prevents a lack of*

scientific certainty to be used as a reason to postpone cost-effective measures to prevent environmental harm" (MMO 2018a, emphasis added)

This quotation appears to acknowledge that the decision-making process attracts a level of uncertainty regarding potential marine environment impact. Reference to the precautionary principle is curious as it implies that when impact uncertainty is present a precautionary approach will be used but that this is applied positively towards development in relation to economic factors. Here the MMO appear to be asserting themselves as decision-making, and assessment, 'experts', and the implications of this are discussed in Chapter 9.

6.2.5. Decision Recommendation and Approval

The MMO's 'make a marine licence application' online guidance asserts that it provides "details on how to apply for a marine licence… and how long it will take" (MMO 2018a). The guidance states that there are three potential outcomes at the end of the determination process: (1) granting the licence, (2) granting the licence subject to conditions and (3) refusing the application. The conditions which "will often be used to mitigate adverse impacts to the environment, human health and other legitimate uses of the sea" (Ibid), must, be "necessary, related to the activity or development for which a marine licence is sought, enforceable, precise and reasonable" (Ibid). These constitute the five tests which regulatory conditions must meet in virtue of paragraph 55 of the NPPF (MHCLG 2019, p15)[47].

The 'decision recommendation and approval' section of the online 'marine licence application timeline' provides a simplified version of potential application outcomes. Following quality checks and required changes "the case manager *approves the licence* and all supporting documents for issuing" (MMO 2018d, emphasis added). The introduction to the graphical online process timeline notably states that it "illustrates how the assessment and *approval* process works…" (Ibid). As stated above, the presumption in favour of sustainable development does apply to marine licence

[47] Marine licence conditions are considered within the case examples below. A fuller review of licence conditions for "environmental mitigation measures/restrictions" which "can result in significant time and cost burdens on industry" has been commissioned and published by the MMO (MMO 2017). As the prescription of licence conditions is not the main focus of this thesis the discussion below is limited in this regard.

determination, however these introductory comments appear to show that all marine licence applications are approved. The marine licensing data appears to confirm this observation, as evidenced below.

Within the quantitative marine licensing dataset the status of a marine licence is provided as either 'completed', 'in progress' or 'withdrawn'. The 'withdrawn' category also includes refused applications. Figure 6.6 presents the analysis results of the number of applications which have been withdrawn or refused in relation to those granted consent[48].

Year	Status of application (per activity)			Total
	COMPLETED (incl. variation requests)	In Progress	WITHDRAWN (Incl. refused)	
2010	103			103
2011	448			448
2012	760			760
2013	770			770
2014	971			971
2015	800	18	8	826
2016	927	32	10	969
2017	784	171	1	956
Total	**5563**	**221**	**19**	**5803**

Figure 6.6 Marine Licence Application Status (per Activity) 2010-2017

It is clear from Figure 6.6 that withdrawn applications are minimal (n = 19). At 0.03% of all licensable activities processed, and 0.06% of licensable activities for the three years 2015-2017 inclusive, this withdrawal rate invites critique of the adequacy of the marine licensing process. This is discussed in Section 7.4 below, and developed further in Chapter 9 following the presentation of the main Goodwin Sands case study. The issuance of marine licences without condition is not possible due to the standard

[48] This is considered in relation to 'activity' rather than 'application' as a decision could be made to withdraw part of an application whilst continuing the application for other activities. For example a licence application to construct a marine structure and dredge an area could be revised to remove the request to dredge whilst continuing to pursue a licence to construct.

conditions which form part of each granted licence. This is evidenced within the case example analysis presented below.

6.2.6. Application Completion

This stage occurs approximately one week after licence approval and is when “marine licence, decision documents and supporting information are published on the public register” (MMO 2018d). It is these published documents which are used as evidence of the publicness of the licensing process in relation to access to data and decision-making within the case example applications presented below.

6.2.7. Monitoring

The final stage of the process forms part of the post-consent phase of the marine licensing process (MMO 2018a; 2018d). Whilst monitoring does include a decision-making element to it and the licence conditions for monitoring activity require approval from the regulator there is limited public consultation, if any, on such monitoring activity. As such the monitoring stage of the marine licence determination process is not included within this current thesis.

6.2.8. Appeals

The MMO’s marine licensing guidance also provides details of the appeals process which applicants can access to contest “a decision to not to grant a licence (sic[49]), conditions attached to a licence [or] the length of a licence” (MMO 2018a). No guidance is provided in relation to the Judicial Review process by which third-party complainants can challenge licence decisions. The judicial review process is discussed within the main Goodwin Sands case study analysis in Chapter 7 and the implications of this considered in Chapter 9.

[49] Typo in original

6.3. Using Case Examples to Explore the Decision-making Process

Analysis of the case example data is presented below using the marine licence determination stages as a framework to provide evidence of the process and allow for later discussion. The complete data tables referenced within this section, and on which findings have been based, are included in Appendix 6.

The case example application sample data was compared to the marine licence activity categories, presented in Figure 5.10 in Chapter 5, to ascertain how representative it is in relation to the wider marine licence application dataset. The results of this comparison are presented in Figure 6.7 and are based on the data presented in Table A6.1.

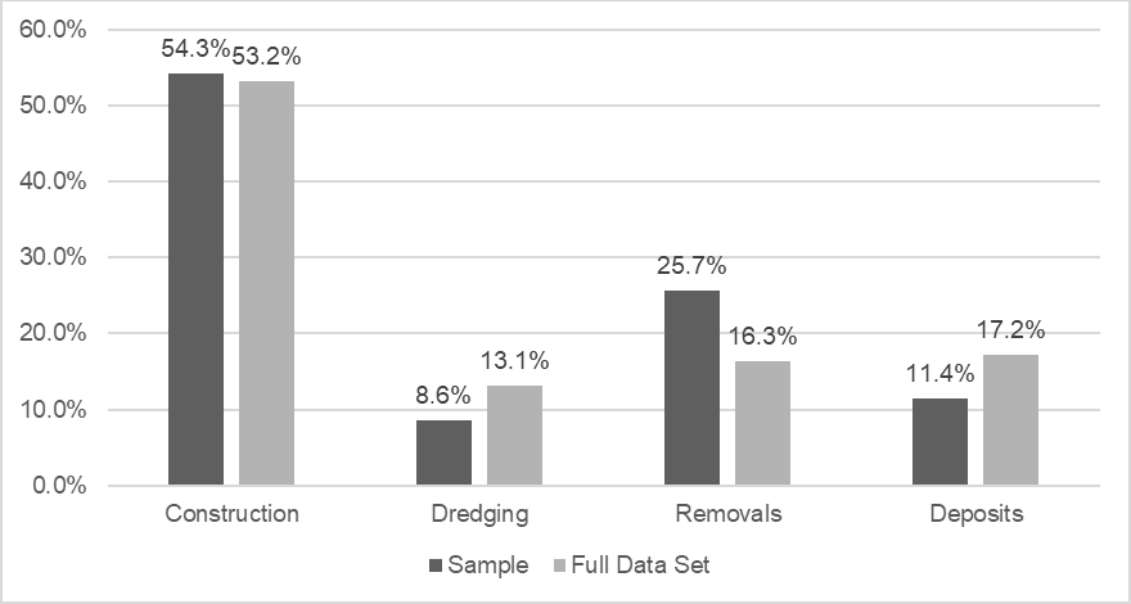


Figure 6.7 Case example Activity Categories

As the 'other works' which form some case example activities can only be defined through review of the cases the 'unable to define' category has been removed from the full 2010-2017 licensing data set. The remaining data has been recalculated to provide the percentages without the 'unable to define' category. Whilst there is some variance between the full dataset and the case example sample for the dredging, removals and deposits categories, the small sample size explains this. As the main Goodwin Sands

case study relates to dredging activity the case examples considered in this current chapter present a generally representative sample in terms of activities covered.

6.3.1. Allocation

Of the 24 case examples analysed 11 had associated variations, with one case (1.BB) having been varied 5 times, although evidence of the details of these multiple variations exclude details on the first variation. Data for case examples regarding 'submitted' and 'determination' dates, and consultation details, is limited to the original application. Details of variations are discussed under the determination subheading below.

The details held on the public register for each application case example vary widely in relation to both the number of documents, and the detail contained within them. The quantitative findings of this and associated trend analysis are presented in Figure 6.8 based on data presented in Table A6.3.

	Reference	Public Register Documents
Band 1	1.BAS	5
	1.BB	12
	1.BL	3
	1.IR	5
	1.LF	5
	1.OP	5
	1.WID	5
	1.WR	4
Band 2	2.AQ	3
	2.BH	12
	2.BSD	5
	2.CQP	6
	2.CWN	2
	2.GG	2
	2.HW	3
	2.KPS	12
	2.PBA	17
	2.QM	10
	2.RDT	6
	2.RPW	5
Band 3	3.ASP	18
	3.GuS	5
	3.SF	14
	3.SSP	6

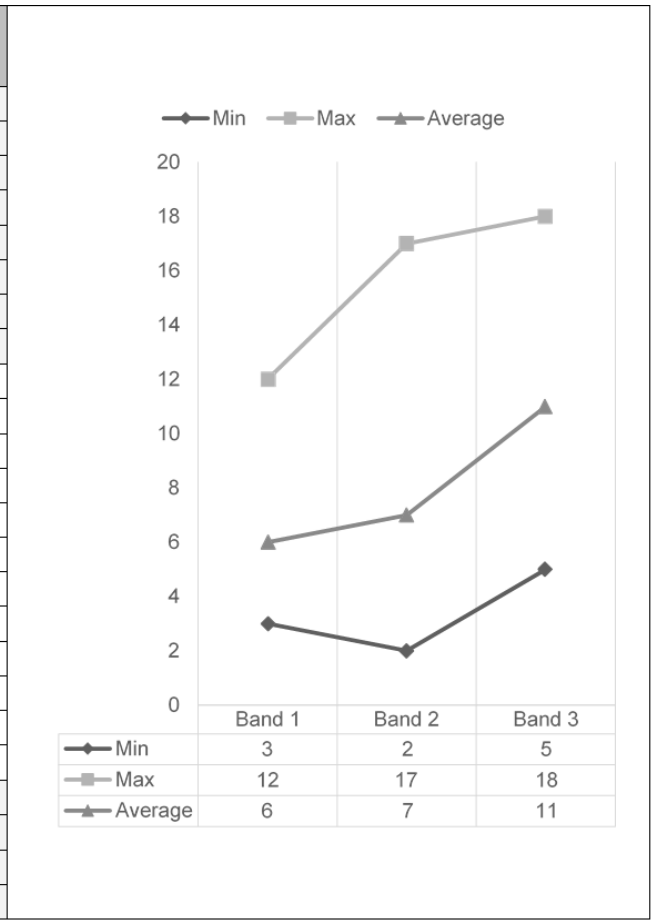


Figure 6.8 Public Register Documents for Case Examples

Each case example application document library included both an application form and marine licence. This demonstrates that for some cases (n = 2) no additional details were available regarding the determination process. One application – 2.RPW (the Archaeological Excavation and Preservation of the Rooswijk Protected Wreck Site) – was subject to a request for details of the project to be withheld from the Public Register which removed even the application form from this review (RPW1). This application did include a redacted WFD and Nature Conservation Assessment report allowing for some analysis of the application (RPW3).

Applications were submitted for proposed projects in either the 'inshore' or 'offshore' English marine area indicating their location in relation to the 12nm territorial sea and inshore marine area boundary. Most applications fell within 12nm of the coast. The analysis suggests a significant association between application fee band and distance from coast with offshore projects tending to be associated with larger scale applications. This is presented in Figure 6.9 based on data in Table A6.1.

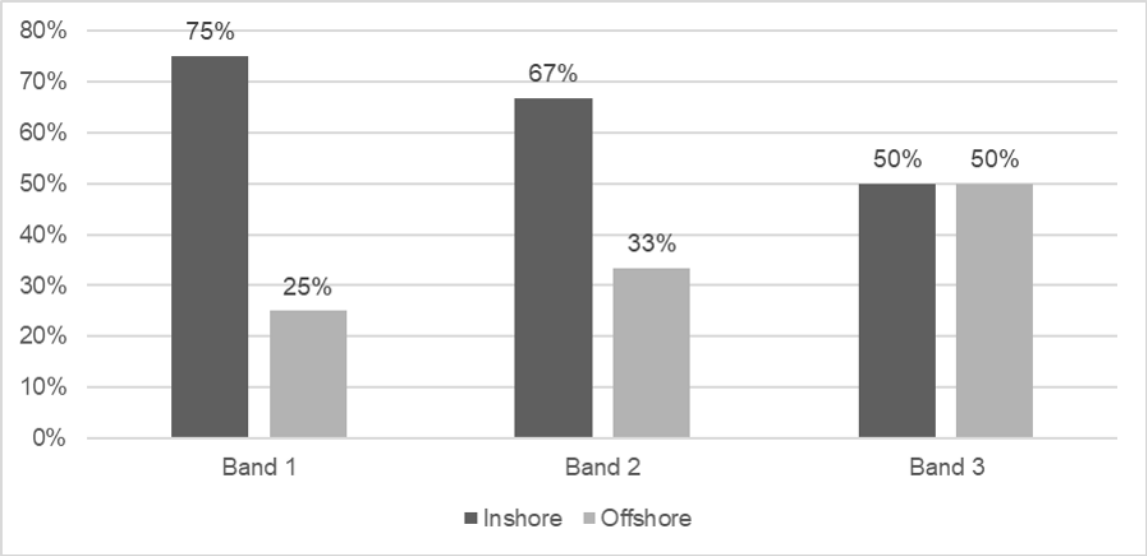


Figure 6.9 Case Example Location (Inshore/Offshore)

One application was determined as a 'self-service' licence (1.BL). Two out of the four 'Band 3' applications (3.ASP, 3.SSP) required consent under the Marine Works (Environmental Impact Assessment) (Amended) Regulations 2017 (HM Government 2017) and as such were submitted with accompanying Environmental Statements.

6.3.2. Technical Assessment

The quality and quantity of the details provided within the case example application forms and supporting documents submitted varied widely. Three applications (1.BL, 2d. CWN, 2e.GG) provided no supporting information. Supporting document numbers in relation to both case example application and in relation to the type supporting information provided are presented in Figure 6.10 from data presented in Table A6.3.

Per Case Example

Reference	Supporting documents (n)
1.BAS	3
1.BB	1
1.BL	0
1.IR	1
1.LF	1
1.OP	2
1.WID	3
1.WR	1
2a.AQ	2
2b.HW	1
2b.RDT	3
2c.CQP	4
2c.KPS	5
2c.PBA	8
2d.CWN	0
2d.QM	4
2e.BH	3
2e.BSD	1
2e.GG	0
2e.RPW	3
3.ASP	9
3.GuS	1
3.SF	1
3.SSP	2

Per Document Type

Supporting Information	Case Examples (n)
Additional consent	4
Additional information	5
Certificate of Non-infection	1
Coroner's Acknowledgement of receipt of notice of intention to remove a body out of England	1
Death Certificate	1
Draft schedule	1
Dredge area chart	2
Environmental Statement (EIA)	2
Environmental Statement (Non EIA)	3
Environmental Statement Addendum	1
Marine licence enquiry email	1
Method statement	8
Natural England Pre-application Advice	2
Nature Conservation Assessment (redacted)	1
Plan/Chart	6
Public notice - previous application	1
Risk Assessment	2
Sample Analysis Results	3
Site photo	2
Survey data sheet for tracer dye	1
Water Framework Directive Assessment	5
(blank)	3

Figure 6.10 Supporting Documents for Case Examples

Half of case example applications required additional consents. This data excludes consent required from The Crown Estate for which limited details were found within the

case examples. Just over one fifth (21%) of case example applications required planning permission in addition to a marine licence. An additional fifth (21%) required consent from a Harbour Authority. Consents from the Environment Agency were required for 16% of case example applications. These findings are presented in Figure 6.11 based on data in Table A6.4.

Consent	Applications (n)
Planning permission	5
Harbour Works Licence	5
Flood Defence Consent	2
Environmental Permit	2
Section 36 Consent under Electricity Act 1989	1
Protection of Wreck Act Consent	1
(blank)	12

Figure 6.11 Case Example Additional Consents

Limited details of the technical assessments carried out by the MMO on the case examples were present within the public register documents. Details of the conclusions to the assessments available within the case example application sample are presented in Figure 6.12 and discussed below.

Case Reference	Assessment	Conclusion
1.BB	LSE assessment	"The proposed works are unlikely to impact the features of this site. The proposed works are maintenance works to the existing turbines and the short term presence of a jack up vessel (it is thought that each exchange will last approximately 4 days) is unlikely to cause significant disturbance. Works are not licensed to take place in the overwintering period, therefore bird will not be disturbed during this sensitive period. … The short term nature of the works is unlikely to cause any significant impacts to bird species in the area. Breeding common terns will be foraging outside the overwintering period and are not considered to be sensitive to these types of activities" (BB11).
2.PBA	MCZ Screening Opinion	"The MMO has determined that the proposed activity is not deemed to be capable of affecting either (i) the protected features of the above proposed MCZ; or (ii) any ecological or geomorphological process on which the conservation of any protected feature of the above proposed MCZ is (wholly or in part) dependant. This is because the works involves the delivery of a floating pontoon via land, and no pathways have been identified for sediment mobilization or anything else which would result in modification of the habitat. The pontoon is necessary for access to the river." (PBA11)
2.PBA	LSE assessment	"The work will be carried out 416m from the designated sites, the activity is not such that generates a significant amount of noise and will not affect species at this distance and the work will not disturb sediment in enough quantity for it to affect protected habitats." (PBA12)
2.QM	LSE assessment	"The MMO can conclude there will be no LSE on the designated sites due to the following reasons: • The small scale nature of the works. • The temporary duration of the works. • The proposed methodologies that will minimise any potential impacts. • The similar activities in the area of the works." (QM5)
3.SSP	MCZ Assessment	"Having considered best available evidence and through consultation with Natural England, the MMO conclude that, providing the above mitigation measures are secured, there is no significant risk of the proposed works hindering the achievement of the conservation objectives stated for the Pagham Harbour MCZ" (SSP5)
3.SF	LSE assessment	"The MMO has determined that the licensable activities **will not** have a likely significant effect on either (i) the designated/ classified features of the protected sites listed above; or (ii) any sub feature of the features for which a site is designated, or supporting habitat for species for which a site is classified." (SF3, emphasis in original)

Figure 6.12 Case Example Technical Assessment Concluding Statements

Likely Significant Effect (LSE) tests under The Conservation (Natural Habitats, &c.) Regulations 1994 (HM Government 1994), were carried out on 4 (17%) of the case example applications. These related to two Band 2 applications (2.PBA and 2.QM), one Band 3 applications (3.SF) and a variation to the Band 1 application for the component exchange licence for Burbo Bank Offshore Windfarm (1.BB). In this latter example the LSE test was required due to the variation requesting extension of the licence end date into a sensitive period for over-wintering birds related to the Liverpool Bay Special Protected Area (SPA) (BB11). All four LSE tests conclude 'No LSE' (BB11, PBA12, QM5, SF3).

The level of detail within each of the additional assessments undertaken on the case examples varies considerably. The LSE test and Marine Conservation Zone (MCZ) Screening Opinion for the Pontoon Boat Access at Wivenhoe (2.PBA) (PBA11; PBA12), are concise documents which reflect the small-scale nature of the project itself which is to construct a floating pontoon and is being constructed from land with minimal marine environment impact. In contrast the LSE test for the decommissioning of two metrological masts (met masts) from the location of the previously proposed but abandoned Shell Flat Offshore Windfarm (3.SF), provides evidence of a more thorough assessment process due to its location in relation to protected areas, and the more complex nature of the activity (SF3).

In contrast to the two-page MCZ Screening Opinion for the Pontoon Boat Access application (2.PBA), the same assessment undertaken for a managed breach of a shingle [littoral] spit at Pagham (3.SSP) runs to 54 pages and provides considerable depth of analysis (SSP5). The assessment includes a detailed description of the project methodology and the report takes five activities through to the screening assessment (Ibid, p4). For each activity, the interaction with MCZ features or pressures is assessed, with several sensitivities identified. As mitigation had been proposed as part of the originally submitted application, these mitigation measures were taken into account within the MCZ screening assessment and, with the caveat that these measures be conditioned with the resultant marine licence, the Opinion concludes that the project poses "no significant risk… [to] the conservation objectives stated for the MCZ" (Ibid, p53). Despite its length, the 3.SSP document does not provide details on the origin of the information used to undertake the analysis or the rationale for its

inclusion. As such the validity of the origin data must be assumed by the reader in order to agree with the report's conclusion of 'No LSE'.

6.3.3. Consultation

Each case example application form asks applicants to provide details of any informal consultation or pre-application advice received from either the MMO or other organisations. Evidence of these informal consultation exercises, gained from review of case example application forms and supporting documents, is presented in Figure 6.13 based on data from Table A6.6.

Per Case Example

Reference	Informal Consultees (n)
1.BAS	0
1.BB	1
1.BL	0
1.IR	1
1.LF	4
1.OP	1
1.WID	1
1.WR	3
2a.AQ	1
2b.HW	0
2b.RDT	2
2c.CQP	2
2c.KPS	1
2c.PBA	9
2d.CWN	2
2d.QM	0
2e.BH	0
2e.BSD	1
2e.GG	1
2e.RPW	Unknown*
3.ASP	1
3.GuS	2
3.SF	0
3.SSP	1

Per Consultation Organisation

Informal Consultee	Case Examples (n)
British Geological Survey	1
Canoe and Kayak Club	1
Cefas	1
Crown Estates	2
Environment Agency	3
Historic England	1
JNCC	1
Local Fisheries	1
Local MP, MEP, Cllr.	1
Local Residents	1
Local Sailing Club	1
MMO Licensing team	11
MMO Local office	1
Natural England	4
Other local stakeholders	1
Unknown*	1
Harbour Authority	3
No Informal Consultation	6

Notes:
*No details available due to redacted application and supporting documentation (2e.RPW)

Figure 6.13 Case Example Information Consultation

This figure illustrates the number of informal consultees for each case example and the number of times each identified informal consultee was consulted within the case example sample.

Nearly half of all applicants (46%, n = 11) consulted informally with the MMO Licensing team prior to submitting their marine licence application. This was often evidenced with reference made to a pre-application enquiry submitted through the case management system. Other consultation bodies included Natural England, Environment Agency and the relevant Harbour Authority. Informal consultation with these bodies related to additional consent requirements. Overall, a quarter (n=6) of all applicants stated that prior consultation was conducted and this was evenly split between the fee bands. One application – 2.PBA, the Pontoon Boat Access at Wivenhoe – provided additional information which evidenced informal pre-application consultation with 9 bodies including several local stakeholders. This level of detail was unusual within the sample (PBA3).

Disappointingly, the case examples provided scant details of the formal consultation process for the applications although this does allow for conclusions to be made regarding the transparency and publicness of the process itself. This is discussed within the wider discussions in Chapter 9 following analysis and presentation of findings regarding the main Goodwin Sands case study consultation exercises. Evidence of formal consultation exercises for the case examples is presented in Figure 6.14.

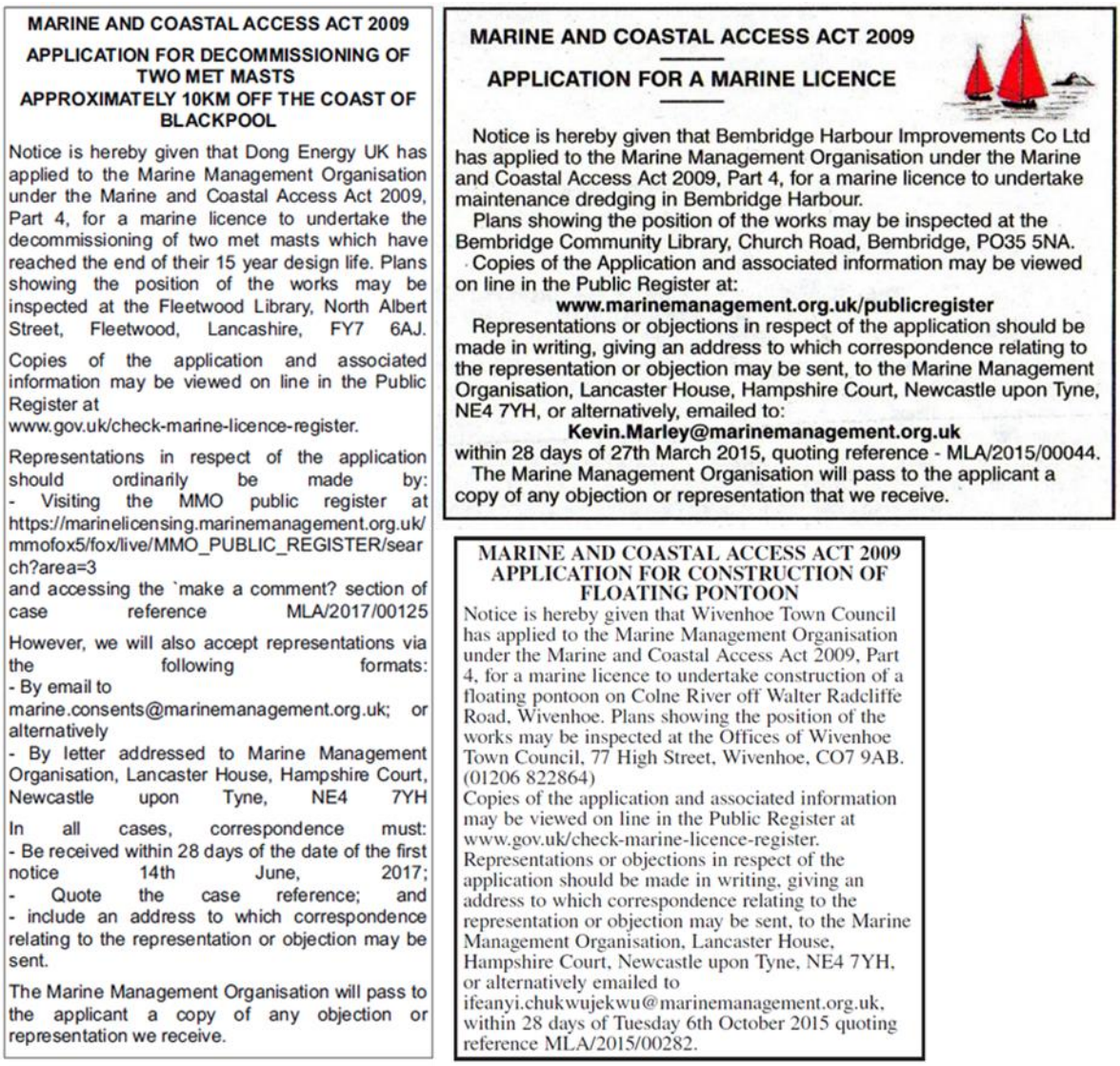
Reference	Formal Consultation (Y/N)	Consultation start	Consultation end	Consultation period (days)	Public Consultation responses (n)
1.WID	No				
1.IW	No				
1.OP	No				
1.BB	No				
1.WR	No				
1.LF	No				
1.BAS	No				
1.BL	No				
2a.AQ	No				
2b.RDT	No				
2b.HW	No				
2c.CQP	No				
2c.KPS	Yes	12/09/2017	31/10/2017	49	0
2c.PBA	Yes	06/10/2015	03/11/2015	28	0
2d.CWN	Unknown*				
2d.QM	Yes	15/06/2017	31/07/2017	46	0
2e.BH	Yes	27/03/2015	04/05/2015	38	0
2e.GG	Unknown*				
2e.BSD	Unknown**				
2e.RPW	Unknown**				
3.ASP	Yes***	01/04/2016	13/05/2016	42	0
3.GuS	Unknown**				
3.SF	Yes	07/06/2017	11/07/2017	34	0
3.SSP	Unknown**				

* Application Form states consultation will happen but no details on public register
** No details available
*** Details from EIA consent decision report ASP14

Figure 6.14 Case Example Formal Consultation

Details of the consultation start and end dates originate from a variety of data sources including EIA consent decision reports (ASP14), Public Register consultation response screens (QM9; SF11) (in which the start date is defined but the end date is assumed based on the last response received), response letters included within the application documents (KPS7-10; QM6-8; BH7; SF4; SF8; SF10), and from the public notices included in the case example document libraries (PBA10; BH5; SF7). The variance in consultation period result in no trends being identified.

The public notices available within the case example public register libraries are presented in Figure 6.15.



MARINE AND COASTAL ACCESS ACT 2009

APPLICATION FOR DECOMMISSIONING OF TWO MET MASTS APPROXIMATELY 10KM OFF THE COAST OF BLACKPOOL

Notice is hereby given that Dong Energy UK has applied to the Marine Management Organisation under the Marine and Coastal Access Act 2009, Part 4, for a marine licence to undertake the decommissioning of two met masts which have reached the end of their 15 year design life. Plans showing the position of the works may be inspected at the Fleetwood Library, North Albert Street, Fleetwood, Lancashire, FY7 6AJ.

Copies of the application and associated information may be viewed on line in the Public Register at www.gov.uk/check-marine-licence-register.

Representations in respect of the application should ordinarily be made by:
- Visiting the MMO public register at https://marinelicensing.marinemanagement.org.uk/mmofox5/fox/live/MMO_PUBLIC_REGISTER/search?area=3
and accessing the `make a comment? section of case reference MLA/2017/00125

However, we will also accept representations via the following formats:
- By email to marine.consents@marinemanagement.org.uk; or alternatively
- By letter addressed to Marine Management Organisation, Lancaster House, Hampshire Court, Newcastle upon Tyne, NE4 7YH

In all cases, correspondence must:
- Be received within 28 days of the date of the first notice 14th June, 2017;
- Quote the case reference; and
- include an address to which correspondence relating to the representation or objection may be sent.

The Marine Management Organisation will pass to the applicant a copy of any objection or representation we receive.

MARINE AND COASTAL ACCESS ACT 2009

APPLICATION FOR A MARINE LICENCE

Notice is hereby given that Bembridge Harbour Improvements Co Ltd has applied to the Marine Management Organisation under the Marine and Coastal Access Act 2009, Part 4, for a marine licence to undertake maintenance dredging in Bembridge Harbour.

Plans showing the position of the works may be inspected at the Bembridge Community Library, Church Road, Bembridge, PO35 5NA.

Copies of the Application and associated information may be viewed on line in the Public Register at:

www.marinemanagement.org.uk/publicregister

Representations or objections in respect of the application should be made in writing, giving an address to which correspondence relating to the representation or objection may be sent, to the Marine Management Organisation, Lancaster House, Hampshire Court, Newcastle upon Tyne, NE4 7YH, or alternatively, emailed to:

Kevin.Marley@marinemanagement.org.uk

within 28 days of 27th March 2015, quoting reference - MLA/2015/00044.

The Marine Management Organisation will pass to the applicant a copy of any objection or representation that we receive.

MARINE AND COASTAL ACCESS ACT 2009
APPLICATION FOR CONSTRUCTION OF FLOATING PONTOON

Notice is hereby given that Wivenhoe Town Council has applied to the Marine Management Organisation under the Marine and Coastal Access Act 2009, Part 4, for a marine licence to undertake construction of a floating pontoon on Colne River off Walter Radcliffe Road, Wivenhoe. Plans showing the position of the works may be inspected at the Offices of Wivenhoe Town Council, 77 High Street, Wivenhoe, CO7 9AB. (01206 822864)

Copies of the application and associated information may be viewed on line in the Public Register at www.gov.uk/check-marine-licence-register.

Representations or objections in respect of the application should be made in writing, giving an address to which correspondence relating to the representation or objection may be sent, to the Marine Management Organisation, Lancaster House, Hampshire Court, Newcastle upon Tyne, NE4 7YH, or alternatively emailed to ifeanyi.chukwujekwu@marinemanagement.org.uk, within 28 days of Tuesday 6th October 2015 quoting reference MLA/2015/00282.

PBA10, BH5, SF7

Figure 6.15 Public Notice Examples

These adverts direct readers to the MMO's public register for further information and provide email and postal addresses for representations. In two instances individual email addresses are provided and in the third a group mailbox is provided as the correspondence address. Each notice also provides details of where hard copies of the application can be viewed.

In all cases where consultation was evidenced, no public representations were submitted. The inclusion of the public notices within the classified section of local newspapers does invite comment regarding the public accessibility of marine licence application information. In the three examples provided in Figure 6.16 a public

consultation period of 28 days is stated in line with the requirements of the Marine and Coastal Access Act 2009. It remains unclear as to where this period originates from and MCAA2009 states simply the following in relation to this matter:

> "Part 4, s69(4) A licensing authority may –
>
> (b) in relation to any particular application, consult any person or body which has particular expertise in any matter arising in relation to that application" (HM Government 2009a, p47)

As previously evidenced, the consultation period for marine licence applications amounts to four weeks for non-EIA applications and six weeks for EIA projects (MMO 2018d). The six week consultation period for EIA projects is evidenced within one case example EIA consent decision report (3.APS) in which reference is made to the consultation requirements stated within Regulation 16(1) (a) (ii) of the Marine Works Regulations (HM Government 2017b) (ASP14, p5). It appears that, apart from a shortened consultation duration, non-EIA projects requiring consultation are subject to the same advertising requirements as EIA projects (Ibid).

The above quotation also introduces a very clear reliance on 'person[s] or bod[ies] which ha[ve] particular expertise…' for gaining information during consultation periods. This statement is not qualified and therefore the question remains as to who is considered an 'expert' with information worthy of inclusion within the decision-making process. This is considered throughout the remainder of this thesis in which the role of the public and the treatment of public comments within marine licence applications is a key consideration for the publicness of the sea and the marine licence determination process.

Details of formal consultation responses received during consultation were available for six of the case examples and the details of these are included in Table A7.5. Identified consultation bodies for these six case examples are presented in Figure 6.16 and are markedly similar to the 'MMO's primary advisors' shown in Figure 6. Additional consultees not previously identified as primary advisors are marked for references.

Consultation Body	Consultations made within Case Example Sample (n)
Cefas	1
Crown Estate	4
Environment Agency	5
Harbour Authority*	2
Historic England	3
IFCA*	3
Local Authority	4
MCA	4
MMO Local Office*	3
MoD	3
Natural England	4
Royal Yachting Association*	4
Trinity House	5
Notes * not included in Figure 6.15 as a primary advisor	

Figure 6.16 Formal Consultation – Evidence of advisory bodies

It is notable that relevant Harbour Authorities were not previously identified as consultation bodies, although the inclusion of 'relevant local authority' in the primary advisor list could stretch to include these. IFCAs could equally be included here. Consultation with the Royal Yachting Association (RYA) on four out of the six case example with details on consultation is also noteworthy due to the public and recreational nature of this body.

The inclusion of the relevant MMO local office, of which 15 are present around the English coastline (MMO 2020), as a consultee provided useful data for analysis. Consultation with the local MMO offices is evidenced through case examples 2.KPS and 3.SF and provides details of local use of the applications' marine area. Consultation responses are provided for a series of pro-forma questions, displayed in Figure 6.17.

Coastal consultation Questions	Do you consider there is enough information provided in the application and supporting documents to enable you to understand the scope of the works, the method and equipment that will be used, and the timings, should you be required to undertake an inspection of the licenced activities?
User Impacts	Please outline any fishing and or other activities carried on by legitimate users of the sea in the area(s) the activities are proposed to be undertaken.
	Are the proposed activities likely to interfere with fishing operations or activities carried on by other legitimate users of the sea (static gear/traditional fishing grounds, navigation measures, recreational use etc.)? Please support your view with rationale.
	Are the proposed activities likely to have an impact on fish/shellfish stocks i.e. smothering fish beds etc.? Please support your view with rationale.
	Please describe any seasonality to the local fisheries relevant to the proposed activities i.e. periods when proposed activity would be unacceptable for any reason. Please support your view with rationale.
Stakeholder engagement/ awareness	Please provide further information about awareness of the proposal locally, as appropriate. (What are the local views? Have there been any stake holder events. Have MO [Marine Officer] attended any meetings? Have there been any press articles? Has fisheries liaison been organised?)
Conservation	Is there any additional local knowledge about the condition of local conservation areas, beyond data held on SPIRIT, which the licensing team should be aware of?
Other projects	Are there any other projects planned or in progress in the area which the licensing team should consider as part of any assessment of in-combination effects?
Conditions	Are there any conditions which you recommend are included in the licence, should one be granted? Please explain why you consider each to be necessary and proportionate. (This could be restrictions / mitigation or monitoring for example).

KPS11, SF11

Figure 6.17 MMO Local Office Consultation Questions

Of most relevance to this thesis is the question regarding stakeholder engagement and awareness. For both case examples the response to this question was inconclusive. The local office respondent for one stated: “Level of awareness unknown“(KPS11). In the second example the respondent stated: “I have not attended any meetings or had any stakeholder engagement regarding this application” (SF11).

6.3.4. Determination

All 24 case examples resulted in a granted marine licence with conditions attached. This comes as no surprise given the analysis of marine licence application status presented in Section 7.2.5 above. The MMO state that they “aim to determine 90% of all licence applications within 13 weeks” (MMO 2018d) and the case example analysis finds limited support for this claim. The licence determination period for each case example was calculated from the submission date and determination date located on the marine licence and marine licence covering letter. As such, this does not account for any ‘hold time’ that the application was subject to and it remains unclear how hold time is allocated or incorporated into the overall determination time. Details of the determination period for each case example are displayed in Figure 6.18 based on data from Table A6.2.

	Case Study Ref	Determination period (Weeks and Days)	Within 13 Weeks
Band 1	1.BAS	1 weeks, 3 days	yes
	1.BB	3 weeks, 0 days	yes
	1.BL	0 weeks, 1 days	yes
	1.IW	6 weeks, 3 days	yes
	1.LF	10 weeks, 1 days	yes
	1.OP	3 weeks, 4 days	yes
	1.WID	0 weeks, 4 days	yes
	1.WR	5 weeks, 4 days	yes
Band 2	2a.AQ	11 weeks, 0 days	yes
	2b.HW	15 weeks, 4 days	
	2b.RDT	9 weeks, 4 days	yes
	2c.CQP	21 weeks, 1 days	
	2c.KPS	15 weeks, 1 days	
	2c.PBA	20 weeks, 0 days	
	2d.CWN	21 weeks, 4 days	
	2d.QM	15 weeks, 2 days	
	2e.BH	17 weeks, 4 days	
	2e.BSD	13 weeks, 2 days	
	2e.GG	11 weeks, 1 days	yes
	2e.RPW	13 weeks, 4 days	
Band 3	3.ASP	33 weeks, 3 days	
	3.GuS	24 weeks, 1 days	
	3.SF	14 weeks, 1 days	
	3.SSP	103 weeks, 2 days	

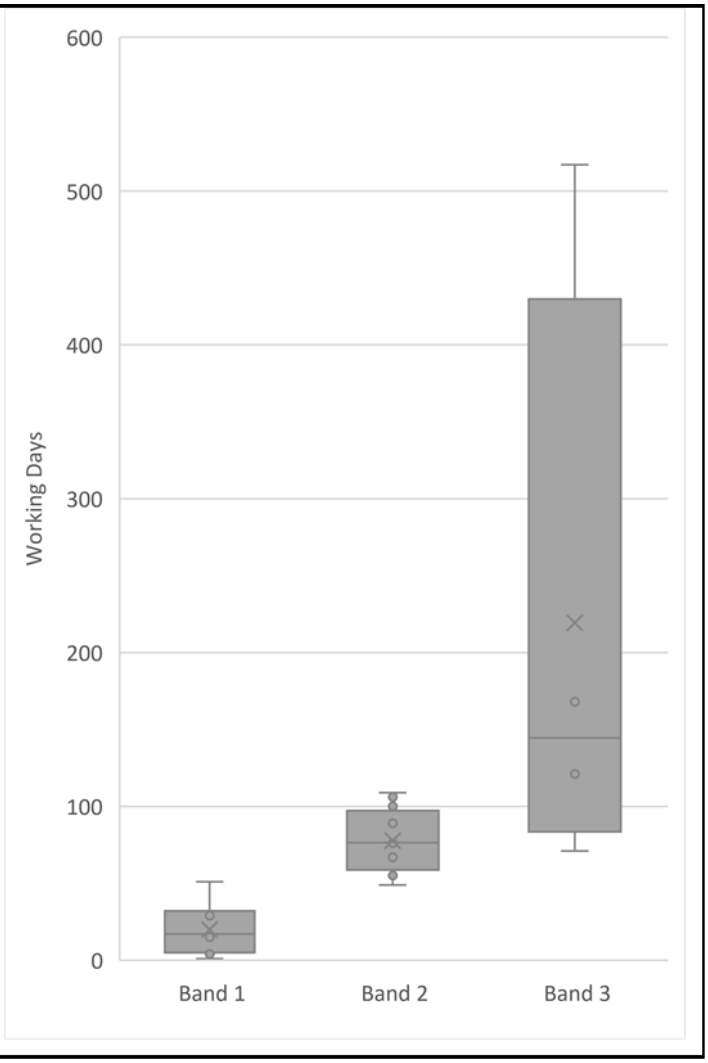


Figure 6.18 Case Example Determination Periods

As evidenced in Figure 6.18, all 'Band 1' case example applications were determined within the 13 week target. This includes the self-service marine licence which the applicant determined themselves using an online application form (MMO 2018i). Only two of the 12 'Band 2' applications met this target along with none of the 'Band 3' applications. This invites the question of whether the determination deadline should be extended for these more complex Band 2 and Band 3 applications. The benefit of extension of the deadline would perhaps add more certainty for applicants and this is further evidenced within the Goodwin Sands case study in Chapter 7.

Correspondence published in relation to the case example 2.BH – Bembridge Harbour Maintenance Dredge – provides additional evidence of the unclear nature of licence determination times. In an email sent to the MMO case officer the applicant states that

they “are becoming seriously concerned with the time this licence (and others) is taking” (BH8). The applicant continues that “the application was submitted on 26 January 2015… we had some communication in Feb requesting details... so it has now been just over 12 weeks” (Ibid). In response, the MMO case officer states:

> “with regards to the progress of your application; the application is still out for consultation. The deadline for responses is 5 May 2015… Once I have all the responses in, I will draft the licence and, *once it has undergone a quality check, I will issue it*” (BH9, emphasis added).

This raises two important critiques. Firstly, no further explanation is provided regarding the delay to the licence application in relation to the 13 week target so no assessment of the reasons for the delay can be given. Secondly, the case officers’ response states that the licence *will be issued* whilst responses from consultation remain outstanding. This appears to pre-determine the application prior to the end of the consultation period.

All of the case example marine licences have conditions attached to them. These conditions are split into ‘general’ and ‘project specific’, and each of the latter is accompanied with a reason for the conditions inclusion. As evidenced above, the MMO asserts that marine licence applications have three possible outcomes; refusal, consent or consent with conditions. The inclusion of ‘general’ conditions within all marine licences appears to contradict this and it is unclear whether consent can ever be granted without being subject to condition.

For two of the 24 case examples the licence start date printed on the granted marine licence appears to be *prior to* the determination date:

- 1.LF: determination date 11/08/2016, licence start date 09/08/2016 (LF5)
- 2.RDT: determination date 09/06/2015, licence start date 08/06/15 (RTD5)

These instances have no consequence to the projects’ environmental impacts however these errors are unfortunate and perhaps allude to licences being granted prior to their publication date.

6.3.5. Variations

Eleven of the 24 case example marine licence applications have variations associated with them. The details of the determination of these variations within the public register

documentation is extremely limited. Whilst variation requests and the resultant varied marine licences are present for all variation requests included in this analysis marine licences, in all but one case (the LSE Assessment for 3.BB discussed above), no details are forthcoming regarding the process by which the variations were determined. This raises concerns regarding the transparency of the marine licensing process. Whilst some variations reviewed are for insubstantial amendments such as a licence holder name change (IW1) or contact address (BSD4), others include extensions to the licence into sensitive periods (BB1) or the removal of conditions (ASP16). In the latter example, the variation request states that a condition applied to the original licence concerning limitation of activity during the sensitive common seal breeding period “is incorrect.” (ASP16). In the resultant varied marine licence this condition is amended to state “…must *not* take place 2 hours either side of low tide” (ASP27, new word emphasised). There is no documentary evidence in relation to the decision to amend this condition however as the variation took 7 days to determine it can be assumed that this was a correction of a typographic error.

6.3.6. Case Example Summary

The case examples featured within this analysis provide additional details regarding the marine licence decision-making process which are not visible within a review limited purely to the legislation and policy framework, and the guidance available within the public domain. These case examples demonstrate the complexity of marine development in English seas and the variations present within the determination of each licence application. These case examples raise many questions regarding the motivation behind actions such as the determination of who to include in consultation exercises and how to apply the information gained through consultation. The secondary data analysed in this section cannot provide clarity on these questions but rather have been used to formulate areas of discussion for primary research interviews. A key research interview relating to the marine licensing process, as exposed within this current analysis, was undertaken with a MMO Marine Licensing representative, and the data gained from this is presented in Section 7.4 below.

6.4. Regulator Perspective of Process

As stated in the research methodology in Chapter 4, engaging with the MMO as marine regulator proved challenging. The ethical considerations regarding the complete anonymity of the negotiated MMO interview participant also provide useful findings regarding the organisations public engagement and transparency. While an 'unofficial' MMO interview participant could be seen as a weakness for this research in that the findings cannot be verified with the Organisation itself, the strength of this data source is in their candid responses. Secured after the data collection and analysis for this research had been completed, this interview allowed the researcher and MMO interviewee to explore themes which had emerged during analysis. The interview findings are presented below, divided into three overlapping areas; policy and legitimate use of the sea, process, and consultation. Additional secondary source evidence is also included to contextualise or substantiate interview findings.

6.4.1. Perspectives on Policy and Legitimate Use of the Sea

The 'broad brush approach' to defining legitimate use of the sea was discussed with the MMO interviewee commencing with the direct question "what is a legitimate use of the sea?" From the interviewee's experience the definition of this term originates as a "response to complaints [and] not necessarily us [the MMO] sitting down and thinking well what is a legitimate use of the sea" (DR:REG1). This response validated the vagueness of the current legitimate use definition which can be seen as understanding given the governance context within which marine licensing sits. The absence of a positive definition allows flexibility and limits future need to amend legislation of delay development based on as yet unknown future needs and uses for the sea. This response also introduces a theme which emerged from this interview of the MMO 'learning through experience' how to manage their marine licensing remit discussed below.

How regulators manage situations where legitimate uses of the sea conflict was found to be rather opaque within the policy analysis and marine licensing case study and case examples. The MMO interviewee provided some clarity on this from the decision maker perspective stating that consent decisions which included legitimate use conflicts were determined in consideration of "who got there first, with the exception of

fishing which, and I feel bad saying that, but generally, the belief is that fishermen can fish elsewhere" (DR:REG1).

6.4.2. Perspectives on Process

Three alternative hypotheses to the minimal post-consent legal challenges lodged against the MMO were suggested by the MMO interviewee. The response below was given to questioning about experience of judicial reviews and appeals threats in general:

> "the MMO has had very little in the way of challenge thus far. And you've got to look at what the reason for that might be. So that could be that because the MMO are doing a bit more in the way of trying to problem solve [so] that actually people understand why decisions are made now and maybe they feel there isn't a strong enough reason to challenge… And the other question is if people aren't being appropriately consulted, how can they object?" (DR:REG1)

It was acknowledged that the MMO does have a reputation for positively determining licence applications. This was considered to be largely the result of marine policy and wider NPPF policies regarding sustainable development (MHCLG 2018):

> "The problem is the presumption in favour of sustainable development as long as it is seen as sustainable development… well we say yes far more than I think any other regulator does. We virtually never say no. I can only think of a couple of cases I've been involved in in my years there where we have said no on." (DR:REG1)

This statement is confirmed by the quantitative marine licensing research findings presented in Section 6.3 of this Chapter. Both of the quotations above suggest that, rather than this lack of refusals being a weakness of the marine licensing decision making, this *evidences enhanced issue resolution* and the desire to be an enabling regulator with regards to sustainable development. Evidence of this perspective is seen through contrasting the marine licensing process with more strict regulatory processes in which applications are more readily refused:

> "if we're looking for a resolution and there are resolutions to issues then I think it, to me, there's benefit [in not refusing applications], and there's benefit to those people who are concerned about that, because you're not necessarily going to get that through the applicant resubmitting… I think you come to maybe a slightly *better decision* because you've had that time to have that engagement and to ideally *bring the stakeholders into some discussion with the applicant*

more and more to try and get these issues resolved." (DR:REG1, emphasis added)

This interview quotation appears to demonstrate a desire held by, at least some, MMO licensing staff to engage in meaningful consultation and engagement with both applicants and stakeholders. Continuing to engage with an applicant through repeated further information requests and consultation can be seen as providing opportunities for development projects to be amended to best meet the concerns of all parties involved in the process.

Related to this theme of the MMO being able to make 'better' decisions through its preference for enhanced and expanded issue resolution rather than refusing marine licences, is the use of 'hold time' within the calculation of adherence to the 13 week determination target (MMO 2018a; 2018d). As such the length of marine licence application determination time was reframed as a positive characteristic of a decision making process, which aims to make better decisions. This allows a different perspective on what were seen as consent delays by the case study applicant. This invites consideration of who benefits from this extended consenting process and the implications of these findings are discussed in Chapter 9.

The theme of 'process transparency' was raised with the MMO interviewee in relation to the lack of publicly accessible marine licensing guidance made available to the organisation. This lack of guidance was interestingly also felt by the interviewee themselves in relation to guidance needed for undertaking technical assessments of marine licence applications. The interviewee stated that guidance provided by Defra to the MMO is "generally on the HRA side and the MCZ's and we're still waiting for guidance on… the Stage 2 MCZ assessment" (DR:REG1). These statutory assessments form a crucial part of the determination of marine licences and are undertaken to ensure that development does not significantly damage marine ecosystems. The lack of direction given to MMO staff in carrying these out is worrying.

As stated in Chapter 4, requests for access to the MMO's internal desk notes were denied due to the desire for them to remain out of the public domain. The existence of these documents had been evidenced through the publication of the sub-sea cable desk-note online (ESCA 2018). The MMO interviewee confirmed both their existence

and their usage within marine licensing decision. Of more concern were comments made regarding their limitations:

> “[They] are quite dated now and they are going through review and are supposed to be updated so at the moment we're just using what we have which is the older desknotes. And I think it's worth noting that obviously marine licensing hasn't been around that long so those desknotes were produced after just a couple of years’ worth of work and I think it's worth saying that it is a learning process and I think unfortunately the best way, or should I say the best source of learning which is not necessarily the best way to learn, but the best source of evidence for why you shouldn't do things is basically doing things wrong.” (DR:REG1)

The candid nature of this response is greatly appreciated and validates the final research methodology due to the research findings being completely absent of this dated and limited process information. The need to review the internal process desknotes also introduces consideration of the implications of the infancy of the MMO. Any young process is likely to be met with challenge, and making mistakes is an unfortunate but important part of this.

From here discussion with the MMO interviewee moved to the perceived lack of public accountability in the absence of licence determination through elected committee:

> “I wouldn't necessarily say [there is] no public accountability. There is accountability there and there are people who will hold us to account if we are making flippant decisions… Obviously with democratically elected [committees] politics clearly plays a lot more of a role in the decision making. It would mean you would lose consistency of decision-making across... an offshore area. The coastal waters obviously …you could just have literally the case officer the case manager put that decision to the local planning authority. But then further offshore it gets a bit murkier as to where you go, so do you have to form a council of the sea effectively?” (DR:REG1)

This response raises an alternative perspective to the consideration of the MMO as technocratic. Consistency of decision-making is more achievable if decisions are not subject to political currents. In the absence of a planning committee there are no members to lobby to ensure they vote in a certain way. Controversial marine licence applications can be subject to democratically accountable decision-making through the marine licence recovery process which sees the delegated decision-making function of the MMO returned to the elected Secretary of State (HM Government 2015). This

recovery process has never been undertaken and the obscurity of the legislation was seen by the MMO representative as the reason for this: “if you don't know it's there then you don't know it's an option then you've got no chance” (DR:REG1).

The opinion that ‘if you don’t know it’s there you cannot make use of it’ emerged as a repeated feature of this interview. Whilst public awareness of a rather obscure, and to date unused, legislative instrument for recovery of marine licence applications to the Secretary of State is understandable and results in limited concerns for claims of publicness within the decision-making process, the question remains regarding public awareness of the standard marine licence consultation process. Interview findings regarding consultation are detailed below.

6.4.3. Perspectives on Consultation

Much of the discussion with the MMO interviewee related to an overarching theme regarding public consultation within marine licence determination. In this sub-section data collected from this interview is presented which evidences high levels of professionalism towards the challenges of public engagement within a resource-limited organisation. In addition to this a more critical stance towards the effectiveness of the consultation process undertaken by the MMO was expressed. The challenges faced by the MMO in its mediatory role were also raised by this interviewee along with potential improvements to the process which are suggested as beneficial to all stakeholders within the process including MMO staff themselves. The public accessibility of marine licensing decision-making from the perspective of the regulator draws this section to a close.

As the findings of the marine licence case example analysis in Section 7.3 show, scant details are provided in relation to the formal consultation process undertaken for marine licences. This lack of evidence resulted in the inability to draw persuasive conclusions regarding the effectiveness of the process. In several case examples it was unclear whether consultees had responded with a ‘no comment’ to consultation requests or had not responded at all (3.ASP). This was raised with the MMO interviewee, who stated that they:

> “will always ask the case officer to chase [non-responsive consultees]. I will never accept ‘No Comment’ unless we've given them several rounds of email

> chasers to say ‘you're overdue’ and follow it up with an ending of ‘if you don't reply by this deadline we will assume you have nothing to say’” (DR:REG1).

This offers some comfort however the individual nature of this comment must be noted. The absence of formal processes evidenced to this regard maintain the challenge of drawing conclusions regarding whether the stated approach is anything other than the best practice of a diligent individual team member.

Moving from direct consultees to engagement with the public, it is striking that there is little evidence identifiable that the MMO has undertaken any review of the effectiveness of its public consultation process in relation to the extent to which it actually engages with the public. In other words there has been no reflection regarding whether marine licensing public consultation exercises are effective in their public engagement aims. This lack of review was confirmed by the MMO interviewee who explained that decision-making staff “have a process that we have been following for years, you're taught that process … ‘this is how you consult people’. You don't necessarily [question it], and you know what, 9 out of 10 cases nobody replies” (DR:REG1). The case example marine licence analysis supports this statement regarding the lack of public response to consultation however it is concerning that there appears to have been no organisational reflection on the reasons behind this.

The two alternative hypotheses to the lack of post consent legal challenge introduced above – the public finds no need/grounds for objection and the public is unaware of licence applications – were considered again during interview questioning regarding consultation. The MMO interview provided useful insights on these potential scenarios which are discussed in turn.

The hypothesis that minimal legal challenges and application public consultation responses are due to the public finding no grounds for objection finds additional support here:

> “People don’t ever say when things are fine… you assume silence is basically OK … if nobody's willing to write down that they have problems, or call you to say they have problems, then it's difficult to know [otherwise].” (DR:REG1)

But this invites consideration of an alternative hypothesis for the lack of public representation and legal challenge, namely that the public are unaware of the marine licence applications. This is an important scenario to explore because while it could be

the case that the public are not responded to public consultation in 90% of cases due to finding no objection to them, this statistic is meaningless without considering the effectiveness of the public consultation process itself.

Marine licence application public notices are placed in local newspapers and in 'suitable locations' as deemed likely to reach impacted stakeholders (HM Government 2009a; MMO 2018d). Notices also appear in Fishing News to engage with the fishing community (Fishing News 2019)[50]. Placing public notices in 'suitable locations' is clearly problematic considering the offshore location of the proposed developments. For coastal projects this makes more sense: a proposed jetty could be advertised on accessible land near the site. For projects further offshore such as the main case study application it is challenging to locate a suitable location. The use of local papers for advertising marine licence applications is also problematic:

> "There are news reports literally on the fact that there are no local papers. And therefore you're struggling to find one [to put a public notice in], and then when you do find one sometimes they are only online and that only captures a certain section of the population and there is... I mean this is not something that's been discussed in the MMO but my personal opinion is that there needs to be some change to how consultations are run." (DR:REG1)

The acknowledgement of the need to reflect on the efficacy of public consultation appears to be limited to individuals rather than the MMO as an organisation. The benefit of improved public consultation on marine licence applications is not limited to the publics objecting to specific developments. Improved systems would improve the accessibility of marine licensing information and in turn allow the MMO to conduct fairer and more substantiated decision-making. This is expressed in the following response to the question 'what would successful public consultation look like?':

> "Successful public consultation is that we know that they [the public] are unhappy…, we know what they are unhappy about and when we are making

[50] This separate and defined stakeholder group has not been included within the definition of 'public' within this thesis. The decision not to include commercial fishing within this thesis is due to the level of engagement this group currently has within the marine licensing process. This is likely a claim contested by the stakeholder group however for the purpose of this thesis including an organised commercial group would have biased the findings away from engagement with, and definition of, publics with an interest in marine development. The inclusion of all consultation adverts in the Fishing News along with the inclusion of licence conditions for Fisheries Liaison Officers (GS45) supports the omission of this group from the definition of 'public' within this thesis.

> our decision, whether it is a yes or a no, we can take their concerns into appropriate account and make an appropriate decision." (DR:REG1)

A key consideration here is what it means to take 'appropriate account' of public concerns. This is a substantial part of the challenging 'mediator' role that the MMO undertakes within the contested value claims attached to controversial marine licence applications. For successful consultation and issue resolution it therefore appears important that all objectors are aware of the process being undertaken and have faith that their concerns are being considered appropriately. The challenges of maintaining this trust are clearly evidenced within the main case study findings, presented in Chapter 7, in relation to data scepticism and cynicism towards both applicant and regulator motivations for their public engagement actions. For regulatory staff this scepticism and cynicism presents both personal and professional challenges:

> "you'll put on more mitigation than the developer would like, but you'll grant permission which the consultees won't like and you're looking at something of a middle road, which probably means you're on the right track but means nobody's happy with you." (DR:REG1)

This perspective gained through regulator reflection on the process based on the research findings adds an additional dimension to the decision-making regime which uncover the day-to-day challenges and hostility faced by licensing staff. The challenges faced in agreeing a 'middle ground' between marine stakeholders for a given marine licence does help to explain the inclusion of licence conditions which otherwise appear to limit public – and indeed primary advisor – opportunity to comment on pre-construction conditions (GS45, discussed in Chapter 7).

Throughout the MMO interview, it became clear that marine licensing casework was challenging and suffered from inadequate resourcing. This was evident within continued discussion of the consultation process in relation to the identification of marine stakeholders for specific applications. Successful consultation appears to be strongly linked to the accessibility of the information about a project for those potentially impacted by it. Through this the alternative hypothesis which proposes that the lack of marine licence appeals is caused by publics being unaware of marine licence consultations can be further explored. The challenge here is the identification of those who *should* be included within a particular application stakeholder group. This challenge finds support in the literature in relation to intrinsic versus instrumental value

of the marine environment and the need to consider underlying environmental ethical judgements which lead to the values expressed within protest discussed in Chapter 3 (Gagnon-Thompson & Barton 1994, p149; Bjerke & Kaltenborn 1999; Kortenkamp & Moore 2001; Karpiak & Baril 2008; Gazzola & Onyango 2018), and is explored in relation to the main Goodwin Sands case study in Chapter 7.

The identification of public stakeholder groups outside of those pertaining to instrumental marine spatial use requires additional resource and time to achieve. This is something that it is clear that the MMO is lacking:

> "We're not really looking to hide or retreat or anything like that, it literally is just down to… can you get them to pay for it. So a lot of the events and stuff that we used to attend we don't attend anymore... We want to go, we'd love to be involved but we can't do that. I mean that's not saying that all stakeholder engagement is stopped. It's just trying to identify where the priorities lie and take advantage of what we can. And again look at costs. If things are closer to home then we're more likely to go because there's less cost." (DR:REG1)

These observations reoccur within the main case study analysis presented in Chapter 7 and further discussion of the consultation and public engagement process is included in Chapter 9.

6.5. Chapter Conclusion

This chapter has presented analysis of secondary source marine licensing case example data, and supplemented this with primary interview data gained through qualitative interview with a marine licensing representative. The case example data analysed is indicative of the level of detail which has been made publicly available for marine licence applications. The documents reviewed as part of the case example analysis fail to provide clarity regarding the decision-making process through which these applications were positively determined. It remains unclear how consultation responses are considered within the decision-making process.

It is unfortunate that the case examples analysed in this chapter do not provide adequate clarity on the marine licensing decision-making process to allow for claims of the transparency of decision-making to be supported. The case examples along with the MMO's own determination timelines provide only a superficial description of the

process. This makes the formulation of a comprehensive understanding regarding this decision-making process challenging. The methodology used within the analysis presented within this chapter is important here. Only publicly accessible documents were analysed in order to identify the determination process and adopting this approach allows for comment on the publicness of the marine licensing *process*. In this way the findings presented in this chapter evidence an opaque and complex process by which decisions impact the public sphere are made. As these consent decisions result in physical changes within marine space the lack of transparency of decision-making evidenced here has a direct impact on the publicness of the sea. Further discussion of these findings and their consequences for the publicness of marine space is included in Chapter 9 supported by the main Goodwin Sands case study findings presented in the proceeding Chapters.

The primary data obtained through the MMO representative interview does provide some clarification regarding the consenting process. However, the methodological limitations of relying on a single, anonymous, interview participant are noted in that the findings, which likely to be an accurate representation of worked experienced within the marine licensing team, are limited in their validity due to their single source. The depth of data gathered through this interview does, however, make up for the limited sample and provides an honest and detailed account of an employee's experience. Combined with perspectives gained from the case examples this interview data remains extremely valuable in its insights regarding the consultation process and concerns felt within the team managing the consenting process. These findings are revisited within the discussion in Chapter 9 where triangulation between this data, case example data and the analysis and findings from the main Goodwin Sands case study is presented.

Overall this chapter as presented findings regarding the marine licensing process for non-controversial applications and as such sets the scene and acts as framing for the main case study which commences in Chapter 7 with a detailed analysis of the Goodwin Sands marine licence application.

Chapter 7. The Goodwin Sands: Dredging, Protest, and Decision-Making

7.1. Exploring the Publicness of Marine Decision-Making

Building on Chapters 5 and 6, this chapter responds to research question RQ2 *How public are the marine development governance frameworks and decision-making processes?,* and specifically RQ2.2b '*how public is the marine development decision-making process?*' The main Goodwin Sands case study marine licence application, and associated primary research interviews, are used as data sources to achieve this and the analysis and findings are presented in three sections.

The analysis of the marine licence application for the Goodwin Sands case study is presented with its analytical focus limited to the publicly available application and licence documents located within the MMO's public register for this application. Through this limitation, the case study application is explored from a perspective which is made available to the public by the regulator. Aligned to the marine licencing case example analysis presented in Chapter 6, the findings in this section illustrate the extent to which the decision-making process can be followed within the suite of case study documents. Primary research data draws on the findings of these case study documents and is presented in two subsequent sections, firstly in relation to public access and engagement within the decision-making process and, secondly to consider the role of experts within this marine licence case study. The final section in this chapter draws these three findings sections together to form conclusions regarding the contested claims of knowledge situated within this decision-making scenario.

Drawing on the Goodwin Sands marine licence documentary data and complementing this with a series of interviews with key agents within the process as well as those who contribute knowledge to the wider marine development management regulatory process, allows for the publicness of the decision-making process to be explored. The perception of key agents within the case study application as presented within the application and marine licence documentation is challenged through the qualitative interview data. These agents bring multiple representations of the Goodwin Sands into the decision-making arena. The multiple representations of space presented within the case study documents are produced within the Goodwin Sands social space which

also comprises many additional representations. These are explored in Chapter 8 along with the materiality and lived experience of the Goodwin Sands social space. Within this current chapter these representations instead demonstrate how contested knowledge claims are formed from these differing conceptualisation of this specific marine space and how understanding this provides insight into the nature of the conflict evidenced within this case study.

7.2. The Goodwin Sands Aggregate Extraction Marine Licence Application

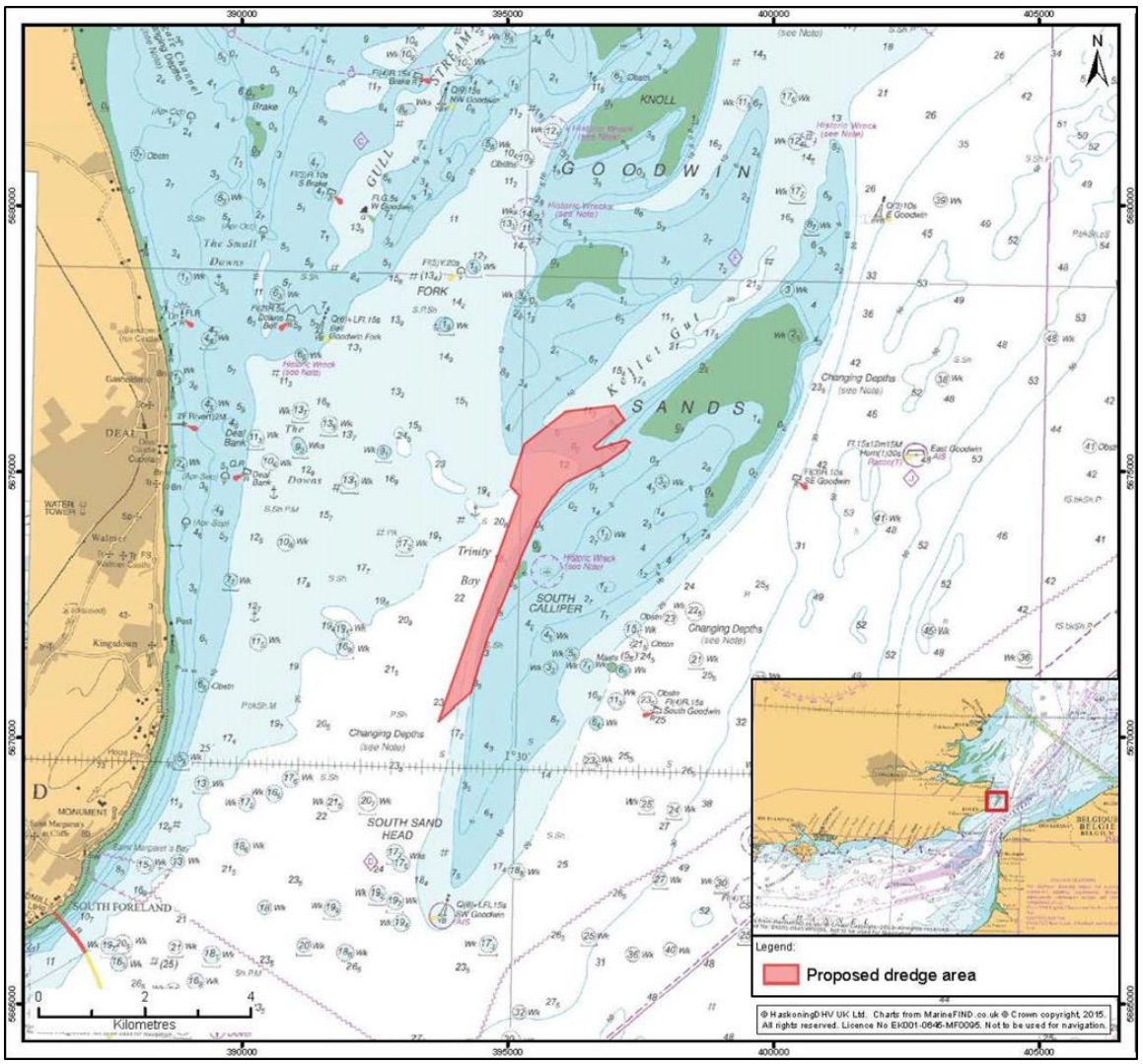
This section presents findings from in-depth analysis of the Goodwin Sands Aggregate Extraction marine licence application (MLA/2015/00227). Research focus is limited to documents produced by the applicant, regulator and consultees during the licence application process. This suite of documents is listed in Appendix 4C and includes the application and associated EIA, consultation responses, further information responses, issues resolution documents and the determined marine licence. Document citation within this section is made to the file references listed in Appendix 4C, unless otherwise stated.

7.2.1. Introduction and Application Context

Dover Harbour Board (DHB) submitted a marine licence application to the MMO on 19 May 2016 to "dredge up to 2 million m^3 [3 million tonnes] of fine to coarse sand from South Goodwin Sands" in two stages between November 2017 – April 2018 and June – September 2018 (GS1, pp13). Consent for this application was granted by the MMO on 25 July 2018 (GS45). The licence took 27 months to determine, and included three rounds of public consultation, as illustrated in the timeline presented in Figure 7.1.

Figure 7.1 Goodwin Sands Licence Determination Timeline

The Goodwin Sands itself comprises both subtidal and intertidal sandbanks. The intertidal sands are accessible at low spring tide whereas the subtidal are continually under water. It is this subtidal sand which is the subject of the dredge application. Geographical context is presented in Figure 7.2 within which the bathymetry of the Goodwin Sands and the proposed dredge area can be seen. Their location in relation to both the Port of Dover (the applicant) and the coastal town of Deal is also visible within this chart. The Port of Dover was to be the recipient of the extracted sand and Deal is the home of the applications' protest group. The significance of these local geographies emerges within the findings presented in this chapter.



GS3.2, p10

Figure 7.2 Goodwin Sands Proposed Dredge Area

It is important to note here that the dredge area (named Area 521 within the marine licence (GS45)) is located *within* the Goodwin Sands, but does not *fully comprise* it. The dredge application is continually referred to as the Goodwin Sands Aggregate Dredging Scheme by all parties involved in the decision-making process.

The marine licence application was submitted as "component of Dover Harbour Boards' wider development within the Western Docks at the Port of Dover… known as the Dover Western Docks Revival (DWDR) development" (GS1, p2). The DWDR development received consent through the Dover Harbour Revision Order 2015 and marine licence in 2015 (Ibid) with the accompanying Environmental Statement (ES) providing a clear intention that "all material required for the reclamation elements of the DWDR scheme will be sourced from the Goodwin Sands and this dredging operation is the subject of a separate MLA [Marine Licence Application]" (DHB 2012, p19). The Goodwin Sands Application was therefore treated as a standalone aggregate extraction activity.

7.2.2. Application and Environmental Statement

The Goodwin Sands marine licence application comprised of an online application form (GS1), coordinates for the project location, and an Environmental Statement (ES) (GS3), with the latter comprising a two-part Environmental Impact Assessment (EIA) outcome report, a two-part Appendix document and a Non-Technical Summary (NTS). In total over 1,100 pages of assessment, with a combined file size of over 136MB, were submitted in support of this application. The NTS consolidates this data into a 33-page NTS stated as being a "standalone document which aims to use non-technical language – where possible – to describe the background to and need for the proposed Goodwin Sands aggregate dredging scheme… and how it complies with the current marine licensing and regulatory regime" (GS3.1, p1).

The NTS is descriptive throughout, providing little detail regarding the assessments carried out within the EIA process. Indeed, the 'summary of predicted impacts, mitigation measure and anticipated residual impacts' tables provide no justification for the presented impact significance other than with reference to the investigations conducted to make such conclusions (GS3.1, pp24). This document provides a 'concise summary' of the assessments undertaken and assurances that these have adequately identified potential impacts and suitable mitigation measures.

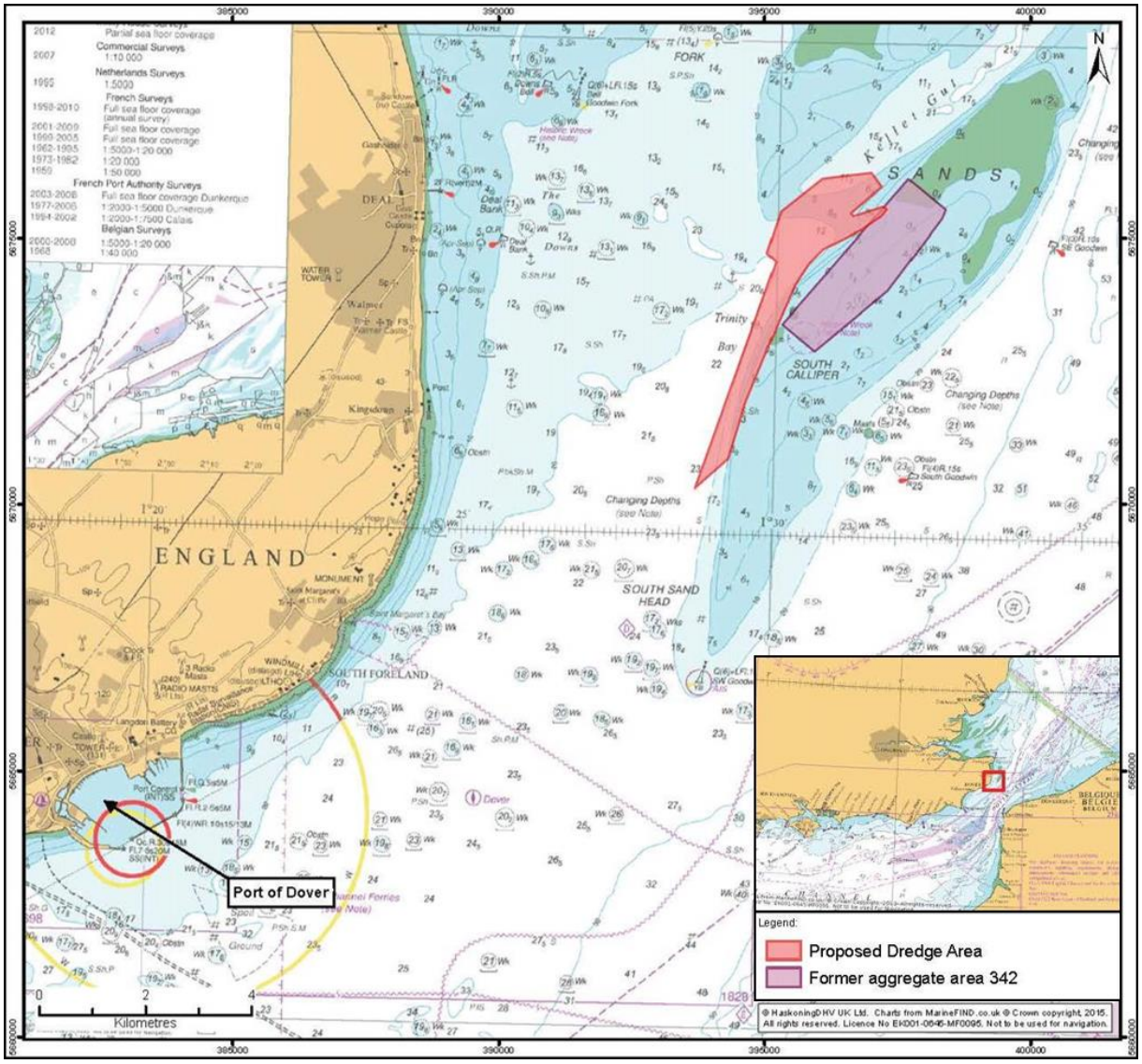
The NTS maintains that DHB has commissioned their consultant to undertake the necessary EIA in accordance with the marine licensing and regulatory framework and therefore provides “the necessary supporting information for the required marine licence” (GS3.1, p1). Further details of the legislative requirements are included in Chapter 3 of the NTS (GS3.1, pp5). The use of rhetoric within the NTS is clearly observed within these legislative framework discussions providing an attempt to convince the reader of the credibility of the authors and creating a sense of legal certainty respectively (Ritchie 2014, p668). In the ES itself the Marine Policy Statement (MPS) is used to provide further regulatory support to the scheme by stating that the MPS “identifies … marine aggregates contribute to economic development and energy security through provision of fill for major coastal infrastructure projects” (GS3.2, p24). Reference is made to the ‘sustainability of aggregates extraction’ statement made in the MPS through the ES declaration that the “MPS stipulates that the extraction of marine aggregates should continue to the extent that this remains consistent with the principles of sustainable development, recognising that marine aggregates are a finite resource, and in line with the relevant guidance and legislation" (Ibid).

The non-technical language used in the NTS, at times, omits important details regarding the application. An example of this relates to agreements already reached with The Crown Estate (TCE) which “serve to grant permission for aggregate dredging subject to a Marine Licence being in place” (GS3.1, p5, GS4.17). The text “for a single use for a limited time period (i.e. aggregate extraction for the construction of the DWDR scheme)” is omitted from the NTS but appears in full within the main ES (GS3.2, p22). This omission impacts the clarity and precision of the NTS and the link between the aggregate extraction scheme and the overarching DWDR scheme. Omissions such as this one lead to misunderstandings and cynicism later in the determination process which are evidenced throughout this this chapter.

Both the NTS and the ‘project background’ section of the application form make explicit reference to the wider DWDR scheme as justification for the need for the aggregate extraction licence. The NTS states that the “proposed dredging scheme is *required* to construct the DWDR development” (GS3.1, p1, emphasis added), whereas the application form states that it is “a *component of* Dover Harbour Board’s wider development” (GS1, p2 emphasis added). The purpose and intended audiences of these documents is reflected in this subtle difference in language. The application form

– directed at the MMO as regulatory authority – appears to maintain the distinction between this project and the wider DWDR scheme. The NTS – directed at a non-technical and public audience –uses the wider scheme as justification for the dredge application. The wording of the 'statement of need' in the application form itself deepens the ambiguity regarding the links between the DWDR scheme and the Goodwin Sands dredge with the economic and social benefits stated based on the successful completion of the previously consented DWDR scheme. The DWDR proposes to "maintain current jobs while creating new ones" (GS3.1, p1), and provide "a significant addition to the leisure and amenity offering in Dover" through the creation of a new marine and waterfront (GS1, p2).

The use of aggregate specifically from the Goodwin Sands for the wider scheme is justified with reference to historical precedence. The application form states that the sandbank is an "important aggregate resource [which] includes South Sand Head, Area 342 (an area historically dredged by DHB as a source of aggregate for port development" (GS1, p2). Details of the most recent Area 342 dredge activity, presented in Figure 7.3 overleaf, is absent of extraction volumes with the ES stating that "intermitted dredging of several million m^3 aggregate [occurred] … between 1984 and 1996 for land reclamation in the Eastern Docks" (Ibid). This dredging activity is used within the ES as justification of DHB's "successful track record of extraction and use of aggregates" (GS3.2, p19). However the absence of detail for previous dredge campaigns makes assessing this claim challenging.



GS3.2, p6

Figure 7.3 Proposed Dredge Area Historic Extraction Context

The assessment of alternative aggregate supplies focuses on environmental and economic factors only, with no reference to social or cultural impact. The use of recycled material was “screened out from further assessment due to a lack of availability within an *economically* viable area” (GS3.1, p4, emphasis added). Supply time was also used as a limiting factor for the alternatives assessed (Ibid). The justification for the Goodwin Sands as the aggregate source concludes that “the alternatives are less environmentally sustainable – particularly in terms of energy consumption – and are less environmentally acceptable in terms of impacts associated with air quality and noise emissions” (Ibid). This environmental acceptability is with

reference to the DWDR scheme impacts rather than the impacts of aggregate extraction or alternatives at the source site. The environmental justification relies on a definition of 'environment' which is wider than the Goodwin Sands sandbank complex and couches its justification in terms of global air quality rather than local physical impact.

The ES considers the Goodwin Sands in relation to four distinct categories of 'environment': (1) Nature Conservation, (2) Physical and Chemical, (3) Biological and, (4) Human (GS3.1, pp8). These categories are used to comply with the EIA process. The inclusion of a separate category for the 'human environment' appears to maintain the nature/culture binary discussed in Chapter 3. The ES itself follows a similar structure with the key environmental receptors/topics presented within eleven assessment sections (GS3.2). The assessments included in the ES are supported by a list of evidence and documentation which aims to validate and strengthen assessment conclusions. This list is reproduced in Figure 7.4 below.

The MMO's Scoping Opinion
Pre-application consultation with MMO and Primary Advisors
Pre-application consultation with other interested parties
Site specific modelling, geophysical, geotechnical and environmental surveys
Previous Goodwin Sands aggregate dredging schemes undertaken by DHB
Public data sources
On-site observations (e.g. from site visits on board DHBs Harbour Patrol Vessel)
Knowledge of impacts associated with other aggregate extraction schemes

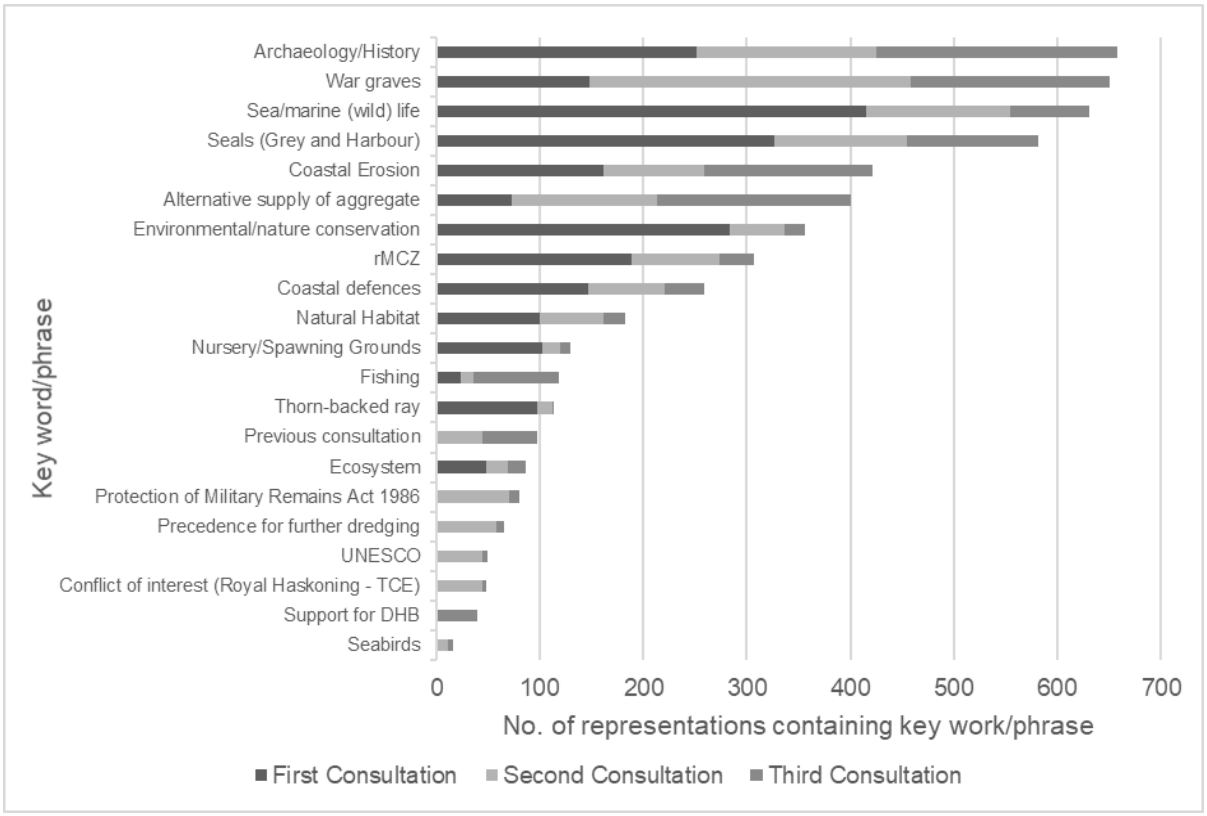
GS3.2, pp34

Figure 7.4 Goodwin Sands EIA Evidence Sources

The inclusion of "knowledge of impacts associated with other aggregates extraction schemes" as a data source is not expanded, leading to ambiguity regarding the geographic location of these other schemes and indeed the validity and strength of the knowledge gained.

7.2.3. Public Consultation and Protest

The Goodwin Sands licence application resulted in 1389 individual public representations submitted over the three 'rounds' of consultation[51]. As part of this case study research these representations have been reviewed and coded within MS Excel to identify key words and phrases. These findings are presented in Figure 7.5.

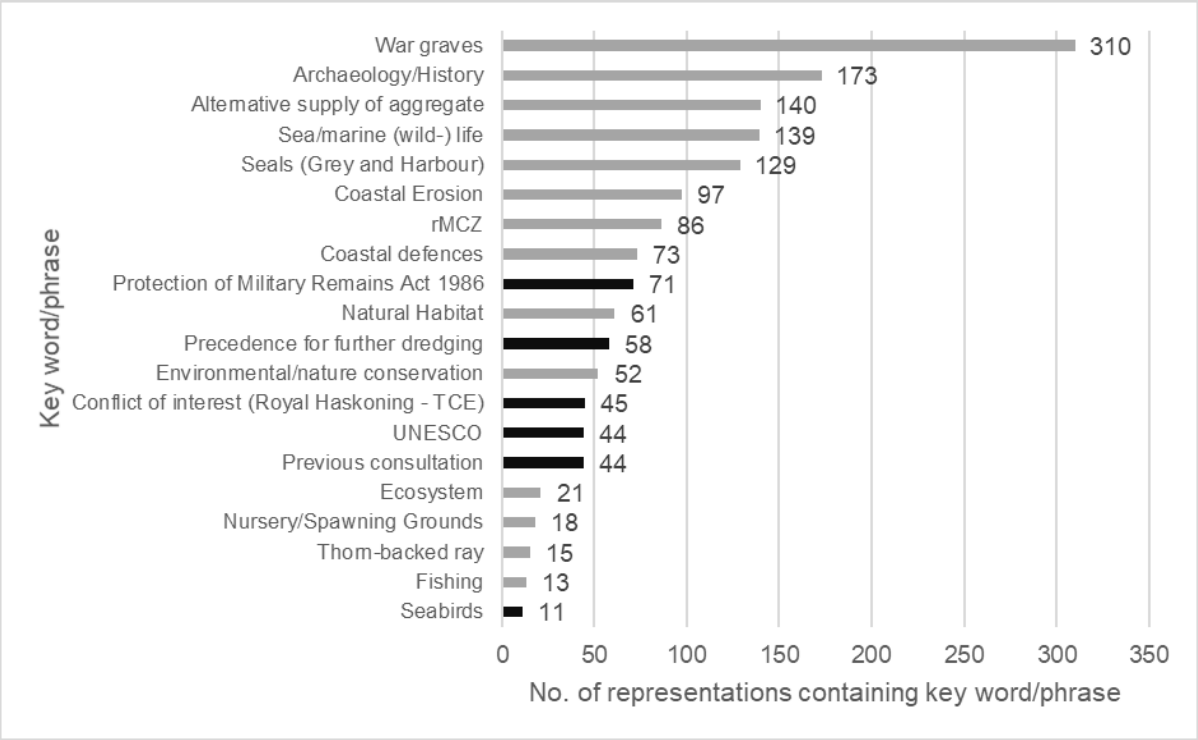


Data Source: GS5, GS15, GS51

Figure 7.5 Goodwin Sands Public Representations (All Rounds)

[51] It is noted, and evidenced within the public representations, that individuals often responded to all three consultation opportunities. Due to anonymised nature of the representations it is impossible to accurately identify the author of each representation and so it is noted that the 1389 representations contain numerous instances where an individual has responded three times, once of each consultation period. Due to the thematic analysis undertaken on these representations this 'triple response' does not weaken the overall findings or conclusions.

Representations often contained multiple points of objection. Coding the 575 ‘round one’ public representations identified 14 key words/phrases. This increased to 20 for within the 470 ‘round two’ representations as presented in Figure 7.6.

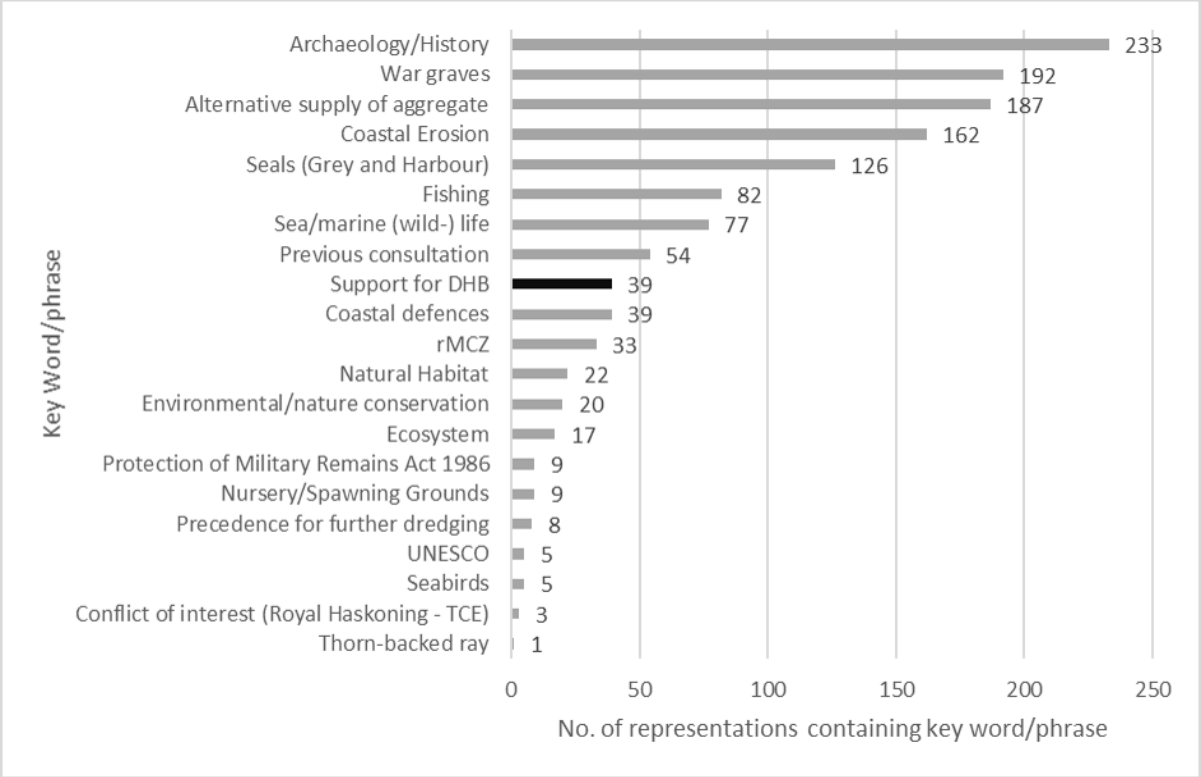


Data Source: GS15 (new themes in black)

Figure 7.6 Additional Representation Categories in Round Two Public Consultation

Much of this increase resulted from perceived insufficiencies in the additional supporting information provided in relation to the assessment of alternative aggregate supplies.

Coding for the 344 ‘round three’ representations correlated closely with those in ‘round two as presented in Figure 7.7. The addition of representations submitted in support of the application within the third consultation exercise relates to public information campaigns discussed later in this chapter.



Data Source: GS51 (new themes in black)

Figure 7.7 Additional Representation Categories in Round Three Consultation

The number of individual representations within each consultation round *decreased* as the licence determination progressed whilst the number of points of objection (key words/phrases) *increased*. This appears to demonstrate that either the additional supporting information provided did not address the concerns raised in earlier consultation, or objectors were employing new avenues of protest as a tactic to prevent consent for the dredge. The changing emphasis of the representations received during each public consultation round is evident within Figure 7.8 which presents the coded representations grouped to align with the 'environment' categories presented in NTS (GS3.1, pp8).

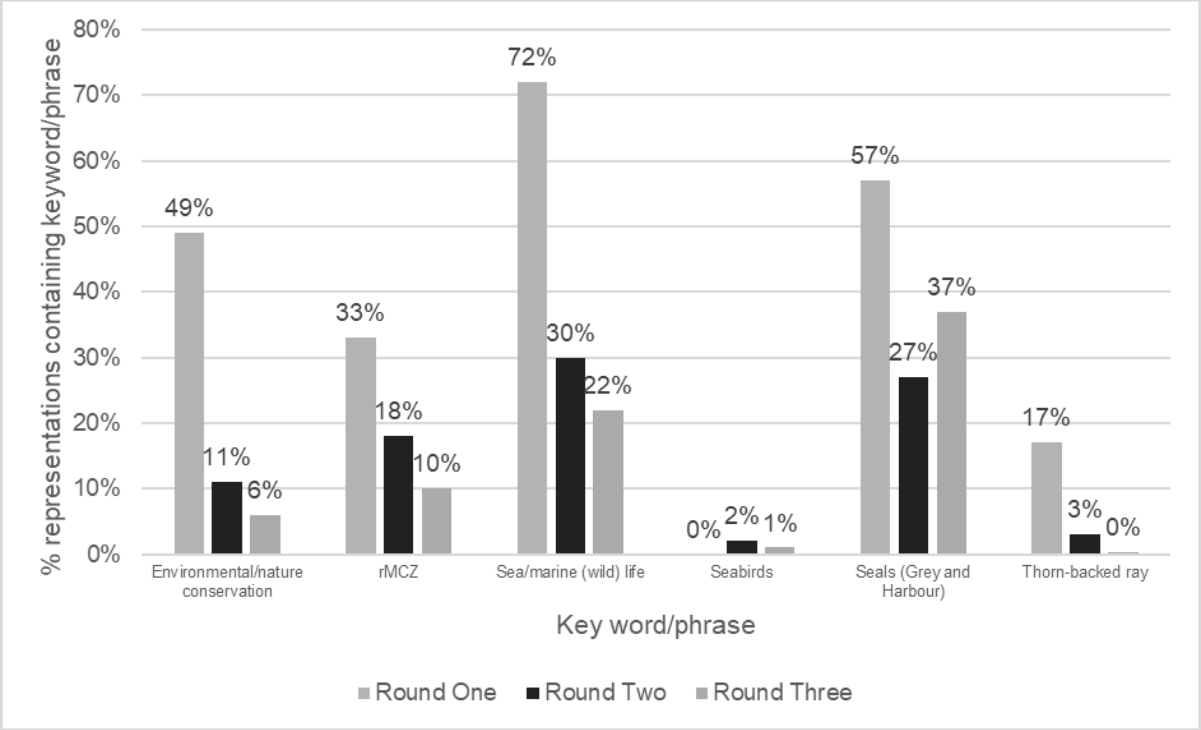
Theme	Key words	Round One (575 reps)		Round Two (470 reps)		Round Three (344 reps)		Total (1389 reps)	
		n	%	n	%	n	%	n	%
Nature Conservation / Biological	Environmental /nature conservation	284	49%	52	11%	20	6%	**356**	**26%**
	rMCZ	188	33%	86	18%	33	10%	**307**	**22%**
	Sea/marine (wild) life	415	72%	139	30%	77	22%	**631**	**45%**
	Seabirds			11	2%	5	1%	**16**	**1%**
	Seals (Grey and Harbour)	326	57%	129	27%	126	37%	**581**	**42%**
	Thorn-backed ray	97	17%	15	3%	1	0%	**113**	**8%**
Physical and Chemical	Coastal defences	147	26%	73	16%	39	11%	**259**	**19%**
	Coastal Erosion	162	28%	97	21%	162	47%	**421**	**30%**
	Ecosystem	48	8%	21	4%	17	5%	**86**	**6%**
	Natural Habitat	100	17%	61	13%	22	6%	**183**	**13%**
	Nursery/Spawning Grounds	102	18%	18	4%	9	3%	**129**	**9%**
Human	Archaeology /History	252	44%	173	37%	233	68%	**658**	**47%**
	Fishing	23	4%	13	3%	82	24%	**118**	**8%**
	Protection of Military Remains Act 1986			71	15%	9	3%	**80**	**6%**
	UNESCO			44	9%	5	1%	**49**	**4%**
	War graves	148	26%	310	66%	192	56%	**650**	**47%**
Procedural	Alternative supply of aggregate	73	13%	140	30%	187	54%	**400**	**29%**
	Conflict of interest (Royal Haskoning - TCE)			45	10%	3	1%	**48**	**3%**
	Precedence for further dredging			58	12%	8	2%	**66**	**5%**
	Previous consultation			44	9%	54	16%	**98**	**7%**
	Support for DHB					39	11%	**39**	**3%**

Data Source: GS5, GS15, GS51

Figure 7.8 Goodwin Sands Public Representations Thematic Analysis[52]

[52] 'Nature Conservation' and 'Biological' are combined into one category due to the limited representation themes in the 'Nature Conservation' category, and 'Procedural' has been included in addition to the remaining NTS categories of 'Physical and Chemical' and 'Human'.

In all Nature Conservation categories the percentage of representations received during each successive consultation round fell markedly. This is the only theme of representations in which every theme experienced a decrease between 'round one' and subsequent rounds. This is illustrated in Figure 7.9.



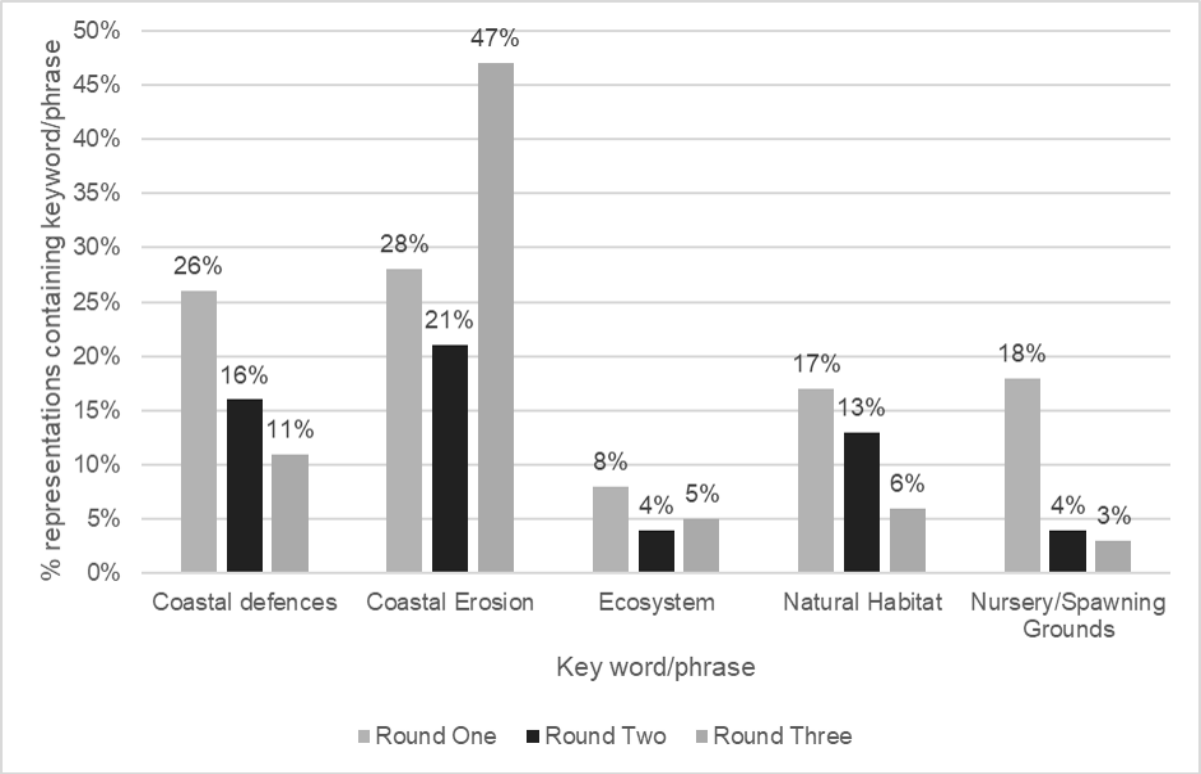
Data Source: GS5, GS15, GS51

Figure 7.9 Public Representations within 'Nature Conservation/Biological' Theme

Categories within the 'physical and chemical' theme include three closely related to nature conservation namely 'ecosystem services', 'natural habitat' and 'spawning grounds'. These have been categorised accordingly due to their focus on *physical removal* rather than *disturbance to marine life*[53]. Representations within this theme decreased in all categories' with the exception of coastal erosion which saw a significant increase within the round three consultation. Nearly half (47 %) of all round

[53] 'Spawning grounds' could also be said to relate to the 'Human' category as these refer to the areas used by commercial fish species for spawning.

three representations contained an objection regarding coastal erosion. There was an absence of representations containing objections relating to chemical impacts. Representations within this theme are presented in Figure 7.10.

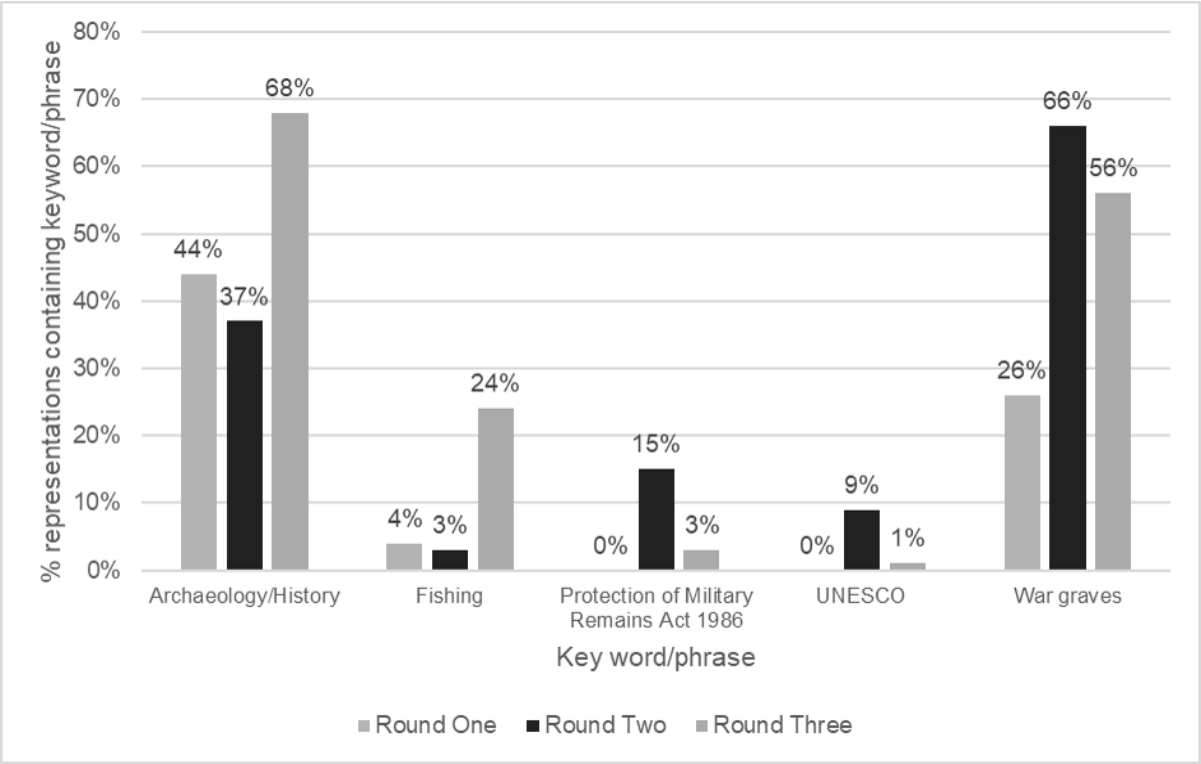


Data Source: GS5, GS15, GS51

Figure 7.10 Public Representations within 'Physical and Chemical' Theme

The 'human' and 'procedural' themes saw the introduction of additional categories of objective within the 'round two' and 'round three' consultations. The 'human' theme evidences the strength of perception of the Goodwin Sands as a historic environment, with strong links to World War II, and specifically Battle of Britain remembrance. The sharp increase in the 'war graves' objections within the 'round two' consultation and the inclusion of specific references to perceived deficiencies in the application in relation to Acts of Parliament or international treaties evidence the growing local knowledge regarding potential impacts to the historic marine environment and to its legal protection. The 'human' theme also includes representation of fishing communities. There is evidence of fishing becoming of greater public concern as the

consultation exercises are rerun. These 'human' theme representations are displayed in Figure 7.11.

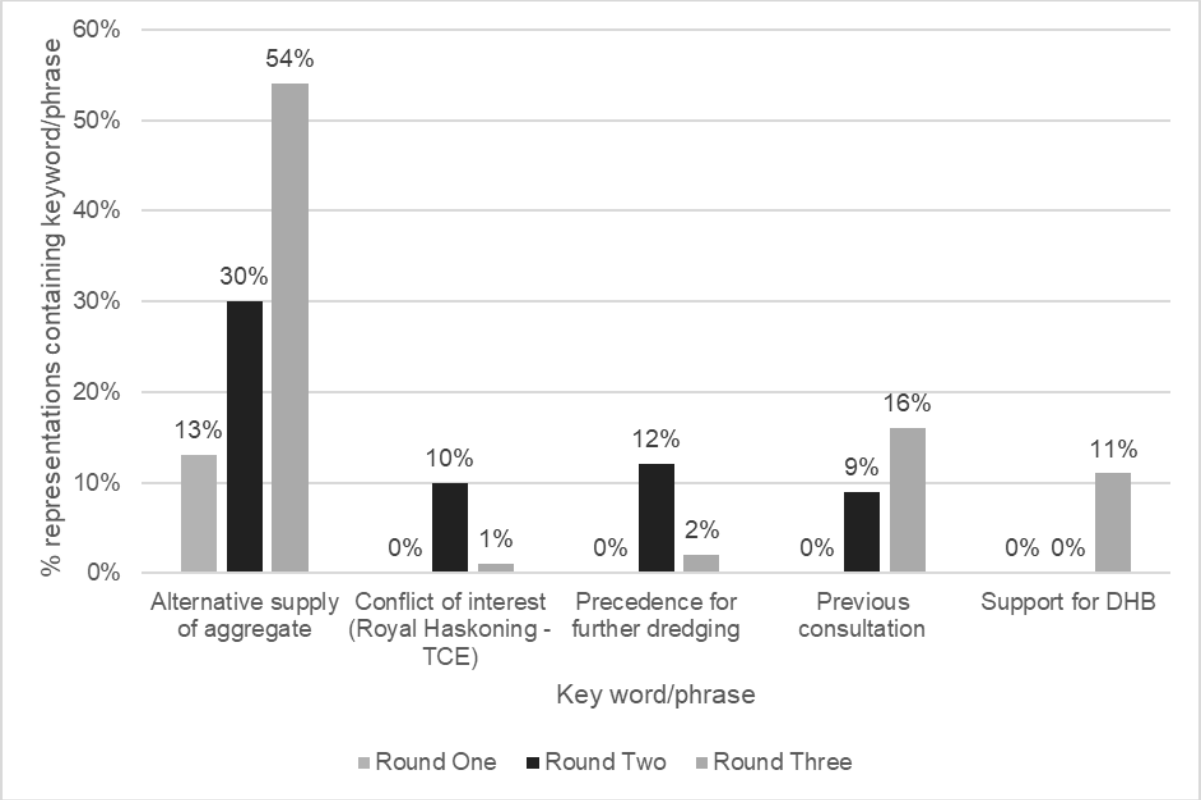


Data Source: GS5, GS15, GS51

Figure 7.11 Public Representations within 'Human' Theme

The 'procedural' theme relates to the licencing or consultation process itself and to the necessity (or otherwise) for the dredge activity. The assessment of alternative aggregate supplies is featured in significant numbers of representations within this theme and this increased throughout the consultation rounds with more than half (54%) of representations in round three including objection on this ground. Conflict of interest regarding the ES's author acting as consultant to both the applicant – for this application – and The Crown Estate – as aggregate resource manager – appeared as an objection in the round two consultation. The precedence that this application appeared to set for future dredging activities was also a popular objection within this round. For both 'conflict of interest' and 'precedence for future dredging' the number of representations fell significantly within the final consultation round suggesting that additional supporting information provided for these objections was accepted by public

respondents. Objections to the previous consultation rounds were a small but significant feature of both round two and three representations. The perceived lack of public engagement coupled with the mixed reception of a strongly contested public advertising campaign by The Port of Dover designed to generate support for the scheme led to representations – both for and against – the proposed dredge. Quantitative details regarding these representations are presented in Figure 7.12.



Data Source: GS5, GS15, GS51

Figure 7.12 Public Representations within 'Procedural' Theme

The quantitative analysis presented above provides insight into the changing priorities exhibited by the public respondents during determination of the Goodwin Sands application. Analysing the representations content qualitatively provides evidence of the emergence and intensification of campaign activity by the Goodwin Sands SoS (Save our Sands) protest group and the "groundswell of opposition" (GS5.24) this resulted in. Numerous responses within each consultation round rely on standard text accredited to the group. References are made to the growing number of petition

signatures collected by the group: “I stand shoulder to shoulder with over 12,000 other members of the public who have signed a petition against the dredging of the Sands" (GS15.90).

The quantitative analysis alone does not, however, provide details on the specific concerns raised against the application. Reviewing each representation in detail allowed for a better understanding to be formed. Characteristic examples of representations submitted within the response themes are illustrated in Figure 7.13.

Nature Conservation
"I urge you with all my heart to refuse the licence application for the dredging of the Goodwin Sands by Dover harbour Board and to allow the beautiful and unique sands to remain a very special and safe place for marine wildlife” (GS5.50)
Physical and Chemical
"I own a house on the clifftop at St. Margaret's Bay & we already have to face terrifying cliff erosion. It seems you have no sense of what damage your project will cause to local people AND to the environment" (GS5.20)
“Chronic coastal erosion is on-going and we must ensure that these uncertainties are properly addressed and not ignored by DHB or their contractors. Contrary to popular belief, the Sands do not regenerate themselves; they move but they do not breed!” (GS50.73)
Human
“Kent Battle of Britain Museum [confirming] that at least 60 planes and 70 aircrew from Britain, Germany and Poland crashed into the Goodwin Sands area during the Battle of Britain 1940" (GS5.14)
“DHB are legally required by the Protection of Military Remains Act 1986 not to tamper with, damage, move or unearth them AND, by the UNESCO Convention and the Valletta Treaty, they are expected to set aside funds for their recovery, restoration and preservation” (GS15.9)
“Local fishermen are unanimously agreed that DHB’s assertion that the fishing grounds of the Goodwin Sands are of little importance is a false one – and in any event, however small their business, their livelihoods will undoubtedly be dramatically affected by the dredging. Why should the lives and livelihoods of individual local people be sacrificed on the altar of the power and might that is DHB?” (GS50.72)
Procedural
“Royal Haskoning DHV manage the marine aggregate branch of The Crown Estate, who own the seabed. RHDHV also compiled the Environmental Assessment. DHB therefore employed a company whose best interests lie in concluding there will be no residual impacts from the dredging” (GS15.103)
“Allowing dredging on the Sands would pave the way for other companies seeking sand for construction” (GS15.27)

Figure 7.13 Examples of Public Objections within Representation Themes

The above analysis of public responses to the Goodwin Sands application consultation exercises provides evidence that the protest group succeeded in raising awareness of the proposed dredge and encouraged the submission of numerous objections. It is also evident that rumours, misinformation and misunderstanding emerged within this increased public interest campaign. These factually incorrect representations show that respondents have not necessarily taken the time to read the application and have relied on second-hand information to form their opinion of the proposal. There is evidence within the public representations that many believe it is the intertidal areas of the Goodwin Sands which will be removed through the dredge activity with references made to visiting 'the Sands'[54]. Examples of this are presented in Figure 7.14.

Rumours, Misinformation and Misunderstanding
"I just can't understand how the Dover harbour board could even suggest such a thing, and for cheap gravel to build an airport!" (GS15.67)
"it may be that the business plan relies entirely on the 'free' availability of the Goodwin Sands material" (GS15.176)
"widespread speculation about the route " (GS15.351)
Threat of removal of inter-tidal sandbank
"Have you ever visited the Goodwin Sands? It's iconic, beautiful, tidal, calm, quiet, empty but for the animals" (GS15.371)
"It is simply stunning. You have to go there once and you will be struck by the raw beauty of the place" (GS15.340)
"Cricket teams have played each year on these sands and they MUST NOT be disturbed… would YOU WALK INTO A GRAVEYARD AND REMOVE THE EARTH IN WHICH YOUR RELATIVES ARE BURIED? Have you NO feelings?" (GS15.350)

Figure 7.14 Consultation Responses: Rumours, Misinformation and Misunderstanding

It is not possible to attribute responsibility of the circulation of the rumours, misunderstandings and misinformation to the Goodwin Sands SoS protest group. The emergence of a counter campaign by The Port of Dover entitled 'Deliver for Dover' does however evidence the perceived power wielded by the group. The DWDR

[54] It is unclear here whether these types of comments refer to primary or secondary impact of dredging – for example, potential secondary impact of the sandbanks becoming unstable and naturally 'filling in' the dredge subtidal areas.

Newsletters published in spring and summer 2017 illustrates the increasing tensions between the Port and the protest group, example of which are presented in Figure 7.15.

Port of Dover 2017a; 2017b

Figure 7.15 'Deliver for Dover' Campaign Material

The public consultation responses submitted in the 'round three' consultation (GS51) were not made available on the MMO's public register until the licence was determined and granted. No explanation is given for this within the documents available in the public register. Qualitative interview findings from discussions with the Port of Dover and the protest group – presented more fully in Section 8.3 – suggest that this was partly due to growing levels of hostility with this application process and a desire to minimise escalating these tensions further (DR:DEV1, DR:PG1). Evidence for this is provided within the public responses to consultation submitted both in objection and support of the application, with examples presented in Figure 7.16.

'Deliver for Dover' Campaign
"I was very disappointed to see the Dover Harbour Board had launched an aggressive and frankly misleading advertising campaign for the Dover Western Docks Revival which impacted on the social fabric of the local community in trying to incite division between the residents of Dover and Deal" (GS51.3)
"DBH will certainly not be losing £1/2 billion in revenue as claimed in their current (and no doubt costly) smear campaign against Goodwin Sands SoS" (GS51.27)
"We are bemused and saddened by the behaviour of the Dover Harbour Board (DHB) who are using bully-boy tactics in public to try to get their way" (GS51.144)
Support for Application/DWDR Scheme
"The development of Dover Harbour is good news and should be able to go ahead without desecrating war graves, destroying historical artefacts, disturbing wildlife and affecting the delicate balance of the eco system" (GS15.198).
"Unfortunately the inaccurate portrait of disturbed basking seals and potential war graves in unhelpful for all involved; and causes unnecessary negative emotions and stress in our communities of East Kent" (GS51.30; identifiable as Christians Together in Dover /Port of Dover Chaplains)
Objection to Protest Group
"I cannot give any support or take seriously anything the Goodwin Sands SOS group have to say in their arguments. A small group of women who have nothing better to do, a couple of lovely actors and some bbc bigwigs who have put out so many lies and misrepresentations of the truth" (GS51.28)

Figure 7.16 Consultation Responses: Hostility and Support

The sense of the Goodwin Sands as part of local identity is clear from the public representations. This ranges from an emotional or sacred attachment (GS15.325, GS15.423) to value judgements regarding the immorality of the proposal ("[It is] just not acceptable in a civilised society" (GS15.277)). The historic instances of annual cricket matches being held on the sandbank are included within consultation responses (GS15.211). This quirky use of the sandbank is juxtaposed against identifying the area as a war grave. Regardless of the perceived acceptable use of the Sands, these public representations illustrate a desire to preserve a local landmark which is part of both national and local cultural history.

A final overarching theme evidenced within the consultation responses is a distrust in the MMO as regulator and the regulatory system itself. The MMO are seen as being unworthy of making decisions for cases such as the Goodwin Sands dredge. No higher authority is suggested however links can be made to a higher environmental awareness and global responsibility to protect the marine environment. Examples of

responses within this theme are presented in Figure 7.17. The reputation of the applicant is also a feature of these distrusting representations.

Distrust in MMO and Regulatory System
"What gives me most cause to be sceptical that the MMO is a robust enough authority is that on the 29th September 2016 the consent for works to the railway line Dover Seawall (MLS/2016/00166) was published even though all works had been completed and the line reopened on the 5th September. Whilst I accept the railway line reopening was of huge importance and all are grateful for its completions ahead of schedule I sincerely hope that DHB do not use this as a precedent to start dredging without a licence" (GS15.19)
"You [The MMO] do not have the moral right to make such a decision - it is above you" (GS15.189).
"When thinking about these things, always ask yourself, what would David Attenborough do? Do the right thing :-)" (GS15.229)
Distrust of Applicant
"a corrupt greedy money grabbing shower of ****" (GS15.42, censorship in original)
"bullshit commercial manouver-ing (sic)" (GS15.337).

Figure 7.17 Mistrust and Reputation Issues

Following the close of the 'round one' consultation, DHB arranged an open meeting in which pre-submitted questions were addressed and additional presentations on the proposed scheme given. The associated 'Questions and Answers Report' (GS9) "presents consultant's technical responses to a series of questions and statements by Save our Sands (SoS) and members of the general public" (GS9, p1). The responses make explicit reference to "the findings of the Environmental Impact Assessment", "industry best practice", "good practice" and "legislative requirement" (Ibid).

The report regularly shifts emphasis to the MMO, and other statutory bodies, with examples of this presented in Figure 7.18.

MMO Emphasis
"the Marine Management Organisation (MMO) and statutory advisors will assess the evidence provided within the ES, including whether the impacts are acceptable, the appropriate mitigation measures are in place and if any monitoring is required. The MMO will only grant Port of Dover permission to dredge if they conclude that it is safe to do so. As long as the Port complies with the licence conditions we cannot be liable" (GS9, p3)
Advisor Emphasis
("Cefas confirmed on 11/09/2015 that Thornback rays… are not protected under Schedule 5 of the Wildlife and Countryside Act 1981" (GS9, p27)
("All such measures will be agreed with Historic England and the MMO prior to the commencement of dredging" (GS9, p37)

Figure 7.18 Technical Responses Shifting Emphasis to other Bodies

This language appears to demonstrate that DHB is working with advisors and the MMO to ensure impacts are within acceptable limits. The public accessibility of this 'Open Meeting' was queries by Goodwin Sands SoS in that it "had been timed where it was difficult for members of the public to attend" (GS11). This point was expanded during qualitative interview, with findings presented in Section 8.3.1.

The status of Goodwin Sands SoS within the application determination is evidenced by a meeting "organised at the request of [the] MMO Chief Executive Officer)… following the submission of a petition with over 10,000 signatures in objection to the Goodwin Sands aggregate dredge project" (GS11). The stated purpose of this meeting was to "provide an overview of MMO marine licensing process and [an] overview of Goodwin Sands SOS concerns" (Ibid). The minutes, prepared by the MMO, display a tone of authority by the regulator and a reluctance to be drawn into moral or ethical concerns regarding heritage impacts.

7.2.4. Direct Consultation and Issue Resolution: The Example of 'War Graves'

The comments provided within each and every direct consultation response (GS4.1-18; GS14.1-21; GS28-12) were reviewed as part of this case study analysis. Their value for this current research is limited. A brief presentation of advisor responses is presented in this section to provide a holistic account of the Goodwin Sands dredge application. The matrix in Appendix 7 presents a summary of the responses submitted by direct consultees as part of the three consultation exercises and illustrates when objections and concerns were addressed. Only four organisations – Historic England, Kent Wildlife Trust, Thanet Fishermen's Association and British Sub-Aqua Club

(BSAC)[55] – maintained their major objections to the application throughout the consultation rounds.

The public consultation analysis findings show that the objection theme which attracted the greatest number of public representations was Archaeology/Heritage (n = 658). Objections making specific reference to the term 'war graves' was a close second (n = 650). As such, the discussion of impacts and their resolution within this section is limited to those provided within this area.

The Historic England (HE) advice submitted during the 'round one' direct consultation seems to vindicate this public interest and provides the strongest objection from any of the direct consultees. Omissions within the archaeological Desk-Based Assessment are to be addressed before HE can "*advise [the MMO] about any* appropriate conditions for any consent [they] may be prepared to issue" (GS4.9, p1, emphasis in original).

For HE the Goodwin Sands "is one of the most diverse, complex, unique and archaeologically fascinating areas of the North Western Europe for known and potential underwater cultural heritage [and] … both regionally and international significant" (GS4.9, p2). Risk to unknown underwater cultural heritage remains an area of major concern for HE through the application process (GS14.11; GS14.12; GS28.4; GS35; GS36; GS37).

Whilst the potential disturbance of war graves attracted vocal public opposition, reference to them as 'WWII heritage assets' is limited within the HE advice. The language used here is technical and made in relation to the requested magnetometer survey which should make it "possible for the Applicant to more reliably assess the potential for buried ferromagnetic archaeological remains which may include aircraft engines, and shipwreck structures and fixtures" (GS14.11). This use of language illustrates HE's role as 'marine historic environment expert' and allows distance between themselves and the more emotive public campaign group.

[55] No direct consultation response from BSAC is available within the licence document library presented on the MMO's public register.

In consultation rounds one and two HE requested the MMO to forgo making a decision until adequate assessments had been undertaken. In the third consultation response HE state unequivocally that a licence should not be issued (GS28.4, p1). Within the response, HE state that substantial changes to the aggregate dredging industry and to marine historic environment protection have occurred since the last dredging of the Goodwin Sands in 1998. These developments in "our understanding of the cultural heritage associated with the marine environment" include citing the contemporary use of Historic Seascape Characterisation and an appreciation that "perception of character will be stimulated by national and local interest, memory and association with historic events which will engender pride and a sense of place among many different groups and individuals" (GS28.4. p2). Historic Seascape Character forms the basis for the strong HE objection in which the advice given is that "consideration of Historic Seascape Character is a directly relevant part of the decision-making process as a primary means to identify *social value from multiple perspectives*" (Ibid, p4, emphasis added).

7.2.5. Advisor versus Public Status in Decision-Making

Throughout the issue resolution and determination of the Goodwin Sands dredge application there is evidence of a separation of public and direct consultation (advisor) comments. This section provides examples of this, focusing on the transparency of data sources and the language used when considering advisor and public comments.

In the MMO's request for additional information from the applicant following 'round one' consultation, the advisor responses received during consultation are consolidated into 'changes required' and 'observations'. The former set out actionable points which the applicant must address. For example: "The ES does not state clearly enough, the intention and objectives for geophysical monitoring programmes, their level of coverage, the periodic frequency, and what they are intending to observe, measure and understand. *This must be provided***"** (GS7, p9, emphasis added).

The wording of the letter implies that, if these changes are made, the MMO will be able to reach a decision (Ibid, p13). The data source of each comment is not provided, however these can clearly be traced back to advisor comments through a review of the published consultation response advice notes as illustrated in Figure 7.19.

Historic England Consultation Advice Note	MMO Additional Information Request
"Whilst we note that the area of seabed is considerably smaller in seabed extent, the Addendum must assess the implications this may have for active avoidance of yet unknown heritage assets…" (GS4.9)	"Whilst **the MMO** note that the area of seabed is considerably smaller in seabed extent, the implications this may have for active avoidance of yet unknown heritage assets…". (GS7, emphasis added)

Figure 7.19 Regulator versus Advisor Comments

All direct consultation responses are reproduced within the MMO's additional information request in this way (GS4; GS7). That the detail of each comment has not been amended by the MMO prior to inclusion invites reflection on the MMO's status as 'marine expert', and appears as a risk to the MMO's authority as decision-maker. It is unclear where the MMO's independent expert judgement is expressed within these comments. Reference is made to the advisors included within the 'round one' consultation, with the MMO having ""received the views of [their] advisers, the Centre for Environment, Fisheries and Aquaculture Science (Cefas), The Crown Estate, Natural England, Historic England, the Maritime and Coastguard Agency (MCA) and Trinity House *amongst other consultees*" (GS7, p1, emphasis added). No reference is made to the fisheries and local wildlife bodies who raised strong objections (see Appendix 7). The numerous public representations received during the first round of consultation are also absent from this further information response:

> "The MMO is currently reviewing the representations received through the public consultation. Should we require any additional information above that detailed in this response, we will contact you separately" (GS7, p11).

Similarly the 'round two' consultation 'MMO response to Goodwin Sands Further Information Request' makes reference to an "additional number of public representations [which the MMO will summarise] in separate correspondence" (GS19). In this way, public responses are distanced from the advisor comments. The motivations for this are not clear within the documents provided on the public register, however this separation of public objection appears to demote its power within the decision-making process. There also appears a risk of pre-determination of this marine licence through this separation. The quotation above appears to state that *only if deemed necessary* will the MMO request additional information following their public

representation review. It is unclear how this can be known prior to the end of this review exercise.

The limited reference to the public responses is also evidenced within a clarification document provided by the applicant in response to the second consultation Further Information Request (GS26). The role of the public within the application process appears diminished through the definition of 'key users groups' provided by the applicant, which is limited to: "commercial and recreational fishing, navigation – commercial, recreational and fishing vessels, energy providers – subsea cables, [and] recreational divers" (GS26.1, p25). This categorisation of key users appears limited to only those physically present within the Goodwin Sands marine environment. Cultural ecosystem services such as spiritual connectedness, wellbeing and cultural attachment are not included as uses and this appears to delegitimise the non-tangible social and cultural receptors and the publics objecting to the dredging activity on these grounds.

The 470 public representations received within the round two consultation are summarised by the MMO in a letter to the applicant dated 22 December 2016 (GS20). These are presented in Figure 7.20.

1	Dredging is not in accordance with the Dover Strait Implementation Plan developed through European Straits Initiative and the Network of STRAits (NOSTRA) project.
2	The increased CO2 emissions from obtaining material from other aggregate sites is not relevant given that the Dover Western Docks Development will lead to an increase in shipping and therefore more CO2 emissions.
3	Funds have not been allocated for the recovery, restoration and preservation of archaeological remains as required for the UNESCO Convention on the Protection of the Underwater Cultural Heritage 2001 and the Valletta Treaty.
4	The professional engineering specification of the quality of the aggregate required should be provided
5	Clarification should be provided as to whether material will be landed at other Kent ports then transported by road to Dover.
6	The Goodwin Sands are a closed system so the removal of sand from one part will lead to a loss elsewhere.
7	The works will impact on otters using Ramsgate as breeding and resting grounds
8	The in-combination impacts with previous dredging since the 1970s has not been considered.
9	Clarification as to why the dredging of Varne bank was not considered instead of Goodwin Sands.
10	No night fisheries data was supplied and other data from 1995 is out of date.
11	The dredging will interrupt the flow of fish such as herring towards the North Sea.
12	It is incorrect to suggest that sandeels are not abundant on Goodwin Sands.
13	The works will impact on seabirds and migratory birds that frequent the sands.
14	The importance of Goodwin Sands as an important foraging area and rest area for both harbour seal sand grey seals has not been sufficiently explored.
15	The Zoological Society of London's (ZSL) grey seal breeding survey (completed in December 2014) has been misinterpreted in the ES. No transects were completed over the outer estuary sand banks, so it is incorrect to say 'grey seals were not present on coastal sand banks, including Goodwin sands'.
16	The proposed exclusion zones for known haul out sites do not include the haul out site at Trinity Bay (2 harbour seals were identified on the sand bank during the ZSL aerial survey on 7 August 2013).
17	The seal exclusion zone should be kept relative to the low tide sand exposure at all times to increase the likelihood that seals become habituated to the dredging and related vessel activity.
18	Will seaweed on the east Kent coast be impacted by turbulence caused by dredging?
19	There is a conflict of interest with the Head of Minerals and Infrastructure at The Crown Estate also being a trustee of Wessex Archaeology.
20	The depth of the geophysical survey should be confirmed.
21	Anomalies may exist in the eastern half on the licence area but were not detected by the geophysical survey as they are buried.
22	Even with the buffer zone, the impact and vibration caused by nearby dredging could disturb or damage the wreck of the Admiral Gardner.
23	Is there a risk of the dredging disturbing historic contaminated sediments?
24	Will marine mammal observers be employed during dredging at night?
25	Further palaeoenvironmental surveys of geoarchaeolgical potential should be undertaken.

GS20

Figure 7.20 MMO Summary of Round Two Public Consultation Responses

The public representations analysis presented in Section 8.2.3 found public concerns weighted differently compared to this MMO summary. The summary itself does not separate public comments into ‘changes required’ and ‘observations’, unlike the direct consultation responses included in the MMO’s further information requests (GS7; GS19). No hierarchy is given to the public comments and the MMO makes their public origin clear (GS20).

In this public consultation summary, the MMO appears to be positioning itself as an *intermediary* between the public and the applicant avoiding direct public engagement which invites the question of the role the MMO is undertaking here whether mediatory or regulatory. Examples of this can be seen in the requested clarifications 1 and 3 within Figure 7.20 (the absence of the Dover Strait Implementation Plan and UNESCO/Valletta Treaty fund from the application). The decision regarding the need to include these documents as part of the support for this application appears to be delegated to the applicant in diminishment to the MMO’s own authority. Identifying this clarification request as purely public appears to limits the value placed on a decision which could easily be researched by the MMO itself. Clarification request 19 – perceived “conflict of interest with the Head of Minerals and Infrastructure at The Crown Estate also being a trustee of Wessex Archaeology” (GS20) – appears different from the conflict of interest raised within the public comments analysed within this current research. Whilst clarification request 19 was raised by Goodwin Sands SoS (GS15.51) the perceived conflict of interest present within the dual roles undertaken by Royal Haskoning DHV (GS15.38 for example of standard text) appears in 10% (n=45) of the public representations analysed above. The conflict of interest concerns raised in the MMO summary of public representations is dismissed as “a governance issue to be managed by the relevant individual and his respective organisation and is not relevant to the determination of this application” (GS27, p7).

Regarding the remaining ‘round two’ public comments summarised by the MMO, it is curious that the 309 public comments regarding potential disturbance of war graves are not directly mentioned and yet potential impacts to otters – mentioned in only 1 public representation – appears to require clarification.

7.2.6. Licence Decision

The Goodwin Sands Aggregate Dredging Scheme marine licence (L/2018/00311) was granted on 26th July 2018 with 51 conditions, including a raft of notifications to be submitted prior to the commencement of the works (GS45). The covering letter accompanying the licence states that the MMO has determined this licence upon consideration of factors, including "representations received from consultees and members of the public" (GS44, p1). The accompanying EIA Consent Decision and Decision Report consolidates public representations into a thematic overview of the "key issues raised by consultees" (GS43, pp15). The three rounds of consultation are outlined along with a list of organisations directly consulted (Ibid, pp12). For each consultation round the public response is summarised by a single line. For example: "the MMO received 575 public representations during the first consultation" (Ibid, p12). The thematic overview of consultee concerns does not delineate the source of representations as either direct consultee or public.

The 51 conditions attached to the consent include 19 which require action prior to the commencement of dredging. These include the submission of charts detailing exclusion zones to "allow benthic re-colonisation" (Condition 5.27, Ibid), "protect wrecks, war graves and archaeology" (Condition 5.2.9, Ibid, p12), sensitive nature conservation features (Condition 5.2.10, Ibid), features of archaeological interest (Condition 5.2.11, Ibid, p13), and seal haul out areas (Condition 5.2.12, Ibid). An archaeological Written Scheme of Investigation must also be "prepared in consultation with Historic England [and] submitted to the MMO for approval 2 months prior to the commencement of any survey work, unless otherwise agreed by the MMO in writing" (Condition 5.2.13, Ibid). These conditions align with mitigation required in relation to key public concerns raised within the consultation. Conditioning the licence in this way appears to prevent the need for additional consultation on mitigation measures submitted in support of the application.

The licence includes 11 conditions which "protect wrecks, war graves and archaeology" (GS45, pp10). The Consent Decision Report, however, is entirely absent of the term 'war grave' including within discussions of the "key issues raised by consultee" (GS43, pp15). The term appears substituted with "archaeological remains" (Ibid, pp19). The Decision Report acknowledges that "there could be incidental

interaction with underwater cultural heritage" (Ibid, p20) but the licence conditions are stated as providing adequate mitigation for any adverse effects. Addressing public comments regarding the applications perceived non-compliance with the Valletta Convention, the decision report states that "DHB has confirmed they have budgeted for the risk of the unexpected discovery of archaeologically significant material" (Ibid). No condition is deemed necessary to ensure that this is the case (GS45).

The discussion and conclusions of the Consent Decision Report relating to the historic environment remain physical in nature. Historic seascape is mentioned "in the sense the term is used by Historic England" (GS43, p22) but there is no discussion of non-physical cultural heritage or an understanding shown that the MMO takes seriously the cultural ecosystem services, as discussed in Chapter 3, that the local population gains from the area. This key area of public objection appears disregarded.

While public objections appear downplayed within the consent decision report the status of the campaign group is acknowledged through their inclusion within the notification of the marine licence which was sent to the applicant, Goodwin Sands SoS and other public respondents one hour before publication of the consented licence.

Following the consent of this marine licence the campaign group appealed the decision through the Judicial Review process. The unsuccessful appeal (Local Government Lawyer 2019; Goodwin Sands SoS 2019) occurred after the analysis for this thesis had been completed and as such is not included within these findings.

7.3. Public Access and Engagement in the Licensing Process

The findings presented above provide a detailed analysis of the public interest displayed within the Goodwin Sands case study marine licence application consultations, and the level of engagement the public campaign group was afforded within the process. Details of the issues raised within both public and direct consultee representations also provide findings which evidence a differential approach to engagement with these stakeholder groups. Reviewing the case study application documents alone cannot, however, provide details of public perception and consideration of motivations used within the licence determination period.

A key argument presented in public representations submitted in response to the application was of the perception that the developer deliberately misled stakeholders through the use of deceptive and incomplete data in their assessment of the impacts of the dredge activity. This argument provides the motivation for many of the specific objections which are thematically presented in Section 8.2.3 and Section 8.2.4.To better understand this argument data was collected through a series of interviews with key public stakeholders and the analysis findings of these interviews is presented below.

As described in Chapter 4 (Methodology), relevant stakeholders for interview were identified through the analysis of the Goodwin Sands marine licence application documents. The findings from qualitative interview are considered in the themes which subdivide this section, and are supplemented with additional field work data to explore the publicness of the marine licensing process for this case study. The interviews provide evidence of the perceived level of engagement with the licensing process and the data used to determine the licence and the level of public acceptance of ‘expert knowledge’ presented in the application documentation. Details of interview data included in these themes is provided in Figure 7.21.

Reference	Interviewee Description	Public Access and Engagement to Marine Licensing Process	Data Scepticism	Accessibility of Information
DR:DEV1	Marine Licence Applicant Representative	✓	✓	✓
DR:DEV2	Marine Licence Applicant Representative	✓	✓	✓
DR:DEV3	Marine Licence Applicant Representative	✓	✓	✓
DR:NSA1	Marine Licence Opposition - Heritage Local Expert	✓		
DR:NSA2	Marine Licence Opposition - Town Councillor	✓		
DR:PG1	Marine Licence Protest Group Founding Member	✓	✓	✓
DR:PG2	Marine Licence Protest Group Founding Member	✓	✓	✓
DR:PG3	Marine Licence Protest Group Supporter	✓	✓	✓
DR:SA1	Local Conservation Charity Marine Officer	✓		
DR:SA2	National Marine Heritage Public Body Head of Marine Policy	✓		

Key:
Relation to Case Study Marine Licence:
DR = Directly Related;
Sector/Body:
DEV = Developer; **NSA** = Non Statutory Advisor; **PG** = Protest Group; **SA** = Statutory Advisor

Figure 7.21 Interview Participants and Emergent Themes – Public Access and Engagement

Absent here is interview data from the regulator itself due to the MMO's assertion that it "cannot discuss an open case" (Email correspondence 29 March 2018). The interview with an MMO representative which was achieved could not therefore be considered as part of this case study. Instead the findings from this significant interview were presented in Chapter 6 and are used within the wider research discussion presented in Chapter 9.

7.3.1. Public Access and Engagement with Marine Licensing Process

Interviews with both the Port of Dover's DWDR Marketing and Communications team[56] and the Goodwin Sands SoS protest group were of key value to this research. Gathering the views of these two stakeholders represent divergent perceptions of the licensing process for the Goodwin Sands marine licence application. The polarising nature of this marine licence application, and indeed the nature of development management itself, made finding 'uninterested parties' incredibly challenging. This was noted by a Port representative who mused as to whether "there [was] anyone neutral in the whole discussion that we could possibly introduce?" (DR:DEV2).

Exploring public access and engagement to the marine licence application with the Port of Dover resulted in three interlinked sub-themes. These were (1) strengthening the credentials of the Port and its consultations during the application, (2) the perception of the Port being wilfully misinterpreted by the public throughout the consultation and determination phases of the licence application and, (3) discrediting the protest group and its advisors. Findings regarding sub-themes 1 and 2 are presented in this section with those related to sub-themes 3 presented within a wider consideration of wider public representation within stakeholder groups.

The Port representatives were vocal in their frustrations about being labelled as "the bad guys" (DR:DEV2) within the licence application process, stating repeatedly that "they could do nothing right" (DR:DEV2). The public meeting held by Port of Dover and its consultants, introduced in Section 8.2.3, was discussed within the interviews. It was stated in the interview that great lengths had been taken to arrange this meeting in a neutral venue at a convenient time. With a quoted eight members of the public in attendance, the frustration was expressed that the protest group "claimed that the public meeting was a farce because we held it far away with a venue that wasn't suitable at a time of day that wasn't suitable, but we put that time of day because we wanted to have the experts to speak to them, we wanted it to be neutral" (DR:DEV2). Likewise a Port representative stated that they "went to every council, we got slammed

[56] These were considered to be the most relevant individuals to speak to as this thesis focuses on public perception of the marine environment and public engagement with the marine licensing process.

every time… All the council meetings had private meetings with SoS before the meeting and they'd already made up their opinion" (Ibid). This latter point was linked to the local democratic process in with "the MPs have gone the way of the protest group because it's gerrymandering. Because they don't want to be voted out, so they've gone with the popular opinion" (DR:DEV1).

The controversial 'Deliver for Dover' campaign was raised within Port of Dover interviews. The motivation for this campaign was stated as "not only to give reassurance to the MMO that we were doing everything in our power to communicate [and] to give reassurance to the stakeholders we were doing everything in our power to communicate, but also to show to stakeholder the negative and positive risks with the licence" (DR:DEV2). This support campaign was said to have "generated about 5000 sign ups saying yes to the licence, which was quite a lot in a 6 week period" (Ibid). But at the same time "the opposition just made hay with it" (DR:DEV1). Whilst these interview responses evidence a certain level of public engagement, it is clear that these engagement opportunities were at the Port's discretion and motivated according to the Port's needs.

In contrast to this, Port staff were notably absent from the annual Dover Regatta held over the Bank Holiday weekend in late August 2018 during research fieldwork. This decision was made following the events of previous years during which staff "got a lot of abuse" (DR:DEV3). These comments illustrate the perception expressed during interview that the protest group have turned the local population against the Port. A historic precedence to this dislike was also evident within the interview responses along with the acknowledgement that "some of it warranted, but more recently probably not as justified" (DR:DEV3). In justification of the marine licence application, the Port were keen to temper this negative reputation with the figure of 120,000 families either directly or indirectly employed by port operations (Ibid). This figure cannot be validated.

The 'Deliver for Dover' campaign was also raised during interview with the protest group. Supporters of the marine licence application were quoted as having been "'vitriolic about us personally" or of "trolling us" (DR:PG1; DR:PG2). Despite this, the protest group appeared ambivalent about the 'Deliver for Dover' campaign. A clear dislike of the nature of the counter protest material was expressed along with a claim of it "actually working in our favour, because people did think it was wrong. They

thought it was morally wrong and they really thought the Port of Dover were out of order on that one" (DR:PG1). Other stakeholders identified as objecting to the marine licence expressed similar views, with one prominent objector appearing to take pride in being one of the main motivations for the 'Deliver for Dover' campaign:

> "They had this big negative campaign, you know, I cost them £50 million, and I was, or the campaign, i.e. what I put forward, was costing £50 million to the local economy… it's just amateurish from start to finish and it's just the sort of big boy tactics of defamation of character and anything they want to try and pick holes in it and try and get their own way" (DR:NSA1).

Like the protest group, this interviewee remained steadfast in their opposition to the dredge licence and their negative view of DHB as both an organisation and as the marine licence applicant:

> "the impression I get is that Dover Harbour Board have decided that they want to dredge the Goodwin Sands and they are going to make sure, one way or another that they do, when they haven't explored other options" (DR:NSA1).

The final consenting of the Goodwin Sands marine licence was raised in discussions with both the Port of Dover and the protest group. According to the Port representatives, confirmation that the licence was to be determined favourably was given to them well in advance of it actually being granted. The Port and MMO then entered discussions regarding the "right time politically" to grant the licence (DR;DEV1). This requirement was largely due to Defra's Goodwin Sands pMCZ consultation which commenced shortly before the licence was determined (DR:DEV1). This potential pre-determination of the marine licence is concerning, but can be supported through the application of the NPPF's presumption in favour of sustainable development (MHCLG, paragraph 11, p6). With regards to the pMCZ consultation – which largely falls outside of the remit of this research – the consultation documents include dredging as a present and future use of the area (Defra 2018, p8). This apparent strategic decision-making regarding the 'right time' to make public the determination of the marine licence was clearly intended to minimise further protest against the decision. The Judicial Review against the licence decision brought by Goodwin Sands SoS attempted to employ the MCZ consultation as key consideration (DR:PG1) and this proved unsuccessful in overturning the licence (Local Government Lawyer 2019; Goodwin Sands SoS 2019).

In addition to attempts to publish the marine licence at 'the right time', the Port interviews evidence two further examples of a perceived intention to minimise disruption from the protest group. Port interviewees stated that the MMO "came down three times to see the protest group" (DR:DEV1), and that "they didn't come down to us once" (DR:DEV2). Acknowledgement was made of regular applicant-regulator teleconferences (Ibid), however this disparity in engagement was perceived as the protest group being afforded a higher level of access to the licensing process than normally occurs within the licence determination process. This enhanced engagement was also perceived by the Port within the decision that, when the marine licence was granted, the MMO "made an announcement to [Goodwin Sands] SOS and [the Port] formally by email an hour before they publicly launched it" (DR:DEV2). This, again, is considered unusual within marine licence determination.

The protest group perceived these MMO engagement attempts as unsatisfactory, with two clear examples given to evidence this perception. Firstly, in relation to cost-prohibitive meetings that the group were invited to, "[the MMO] inviting us all to that meeting when [they'd] clearly made the [licence] decision cost 100 quid in train fares" (DR:PG1). Secondly, the group stated that the MMO had "allocate[d] £10,000 for a mediator to sit down between Dover Harbour Board and us [Goodwin Sands SoS] to discuss the licence" (Ibid). This offer was not well received. The group representative stating the opinion that "you can't do that under UK marine law… but the fact that [the MMO's CEO] would agree to that we thought was very dubious, suspicious" (DR:PG1).

Protest group suspicion was not limited solely at the MMO and the Port of Dover but extended to other stakeholders and advisors within the application process. This evidences a data scepticism apparent within the protest group and its supporters. Findings related to this theme are presented below.

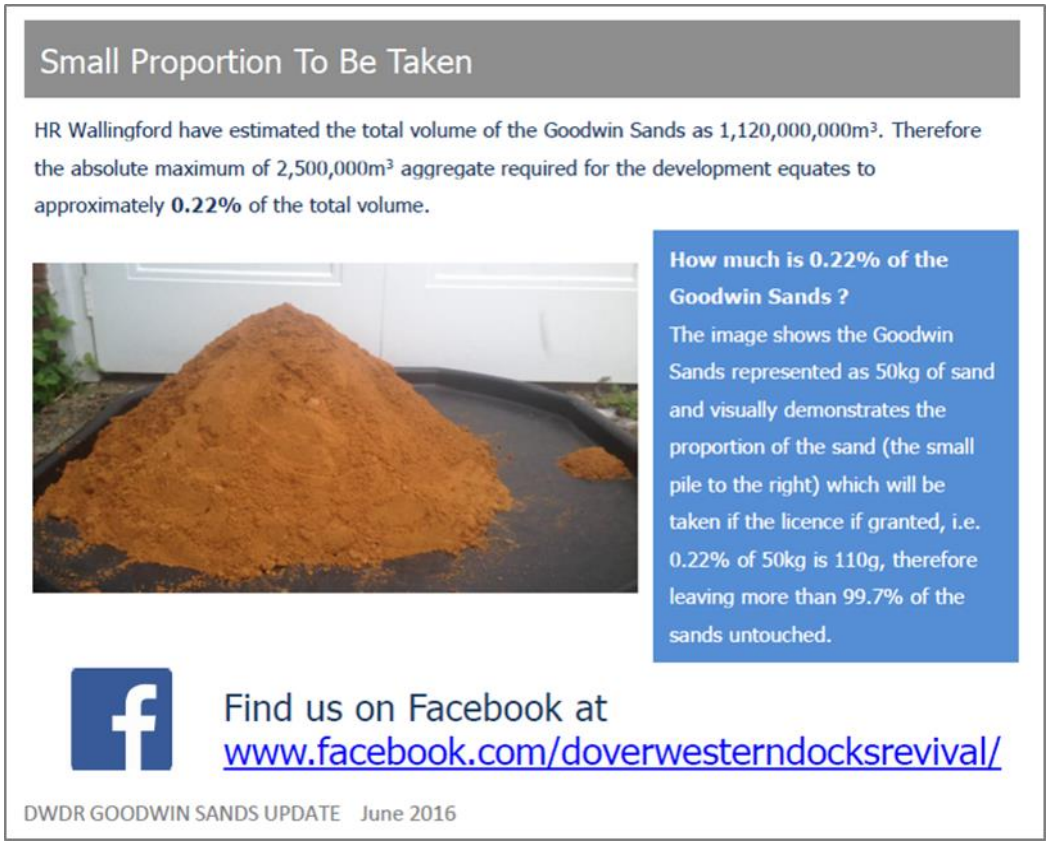
7.3.2. Data Scepticism

Early pre-interview correspondence with the protest group provided an introduction to the level of data scepticism perceived within the group:

> "What made us really mad (and suspicious) was the quality of the Scoping Report produced in July 2015… It was inaccurate, inconsistent, contradictory and downright dismissive of the issues at hand. It was so clearly engineered to conclude that there would be 'no residual impact' on anything from the dredging… The problem with the Scoping Report and the full EIA is that they

> are commissioned and paid for by the developer. They are not independent documents. The contractors used… do not wish to put obstacles in the way or they will not be employed again. Thus their reports have to conclude that all will be well" (DR:PG email 23 May 2018)

The presentation of data within the applicants publicity campaign, reproduced in Figure 7.22 below, was also criticised as being misrepresentative due to reliance on percentages: "People with percentages, people don't understand percentages. Yes [it's only 0.2%] of the whole of the Goodwins but this is one small part and it's a much greater percentage of a smaller part" (DR:PG2).



Port of Dover 2016

Figure 7.22 Applicant's Representation of Goodwin Sands Dredge Volume

Data scepticism extends to the marine licensing process itself, with specific reference to the responses received from SNCB's within the Goodwin Sands application consultation. As evidenced within the consultation response from these advisors comments are limited only to receptors which fall within a particularly SNCB's remit

(GS4; GS14; GS28). Whilst an advisor can question the validity of the data included within an assessment once this validity has been accepted the data itself cannot be challenged. For the protest group these limitations mean that "there's no point consulting [them] because they're always going to say yes" (DR:PG1). In other words, consultation is managed in such a way that SNCB objection is not possible.

The statement made within the marine licence application that dredging is a 'usual activity' was met with contestation by the protest group interviewees. The EIA Consent Decision Report (GS43) made reference to this in relation to representations received during consultation stating that the MMO should "refer the marine licence application for recovery to the Secretary of State for under Marine Licensing (Delegation of Functions) (Amendment) Order 2015" (GS43, p14). In the EIA Consent Decision Report the MMO responded that the application did not meet the criteria for such a referral because dredging was "not a novel activity" (Ibid, p15). The protest group disputed this, stating that "this particular area is not [a] usual dredging point and there's so much other significant stuff to counter it. But you know the way they wrote it was 'well dredging happens anyway', but there wasn't the caveat that 'not in an area like this'" (DR:PG1).

The quality and accuracy of the data presented within the application was also queried by a local historian. The potential for disturbance of World War Two (WW2) wreck and war graves was assessed using data provided by the MoD in response to a list of Goodwin Sands Battle of Britain air crash sites provided by this historian on behalf of the protest group. The compiled list was disputed by the MoD due to its perceived questionable data validity however:

> "Initially the MoD said 'great' and within the last six months they've tried to undermine what I've put together and said 'it's wrong and it's not accurate'. Where's their proof? Because if they know where these missing aircraft are why have they been concealing it for 78 years? If they know differently [then] they've got information they're not sharing at all" (DR:NSA1)

In response to this data scepticism, the Port of Dover maintain that their licence application was the subject of a collaborative planning process in which its local 'partners' were involved from the outset. Where the protest group found reason to be sceptical, the Port counted with the view of the protest being unreasonable and basing their views on misinformation gathered from unverifiable sources (DR:DEV1;

DR:DEV2). An example of this is the dispute over alternative dredge locations presented in the ES and Further Information Responses (GS3.1; GS3.2; GS8; GS26.1; GS27). The Port believed that "you just couldn't get [the] message across… because the argument thrown at us was 'OK well you're going to the Goodwin Sands because it's cheap and cheerful'" (DR:DEV1). The accusation of the Port putting profit ahead of environment was stated as a misrepresentation and ignores the Ports right "to be commercially sensible, and the commercially sensible option was to go to one of the nearest sources of sand" (Ibid). A clear disdain for the Port of Dover was apparent within protest group interview comments. Recounting a meeting with a DHB member one interviewee stated that when questioned over why the Port was planning on dredging Goodwin Sands the member "had this smug smirk on his face and he said 'because we did it before'. And they did it 40 years ago when there was no regulatory requirements whatsoever and that just put my back up… You can't just take what you want" (DR:PG2).

Data scepticism also extends to those proposed to carry out the dredging activity, and relates to the application ES assertion of the "successful track record of extraction and use of aggregates" (GS3.2, p19). The reputation of dredgers, and their crew, being less than sympathetic to both the natural and historic environment was acknowledged by Port representatives: "I know the dredgers used to have a bit of reputation but they're quite high tech vessels now" (DR:DEV3). This distrust towards dredging crews is clearly seen in interview comments which provide anecdotal evidence which appears impossible for any applicant or dredging contractor to countenance:

> "I've been told when they find stuff on the dredge, if nobody is about it goes straight over the side because it's going to slow them up. Which I'm sure goes on … but obviously they will deny it" (DR:NSA1)

Attempts appear to have been made to address scepticism of the data within the application supporting documents, and of the licensing process itself. Minutes of a meeting between the MMO and the protest group at the House of Commons during the application process attest to this (GS55). The minutes provide an MMO statement that: "in general terms, the MMO does not make a decision based on the voting principle… it is not about the numbers for or against a particular project but about *evidence*" (Ibid, p7, emphasis added). In response to this Goodwin Sands SoS "commented that evidence based research is *only as good as the evidence provided*

in the first place" (Ibid, emphasis added). The objections raised by the protest group, and its supporters, to the licence application appear to be based on observable and verifiable data. It is the sources of these data which appears to prevent their inclusion within the project impact assessment. Findings regarding these 'non-expert' data sources and knowledge claims are presented in Section 8.4.

The High Court Judgement made following the Judicial Review of the marine licence dismissed the protest group's appeal. The judgement was made based on witness statements from a marine aggregates "subject matter expert" and "a number of other expert [marine licensing] staff" (Royal Courts of Justice 2019). Overall, the appeal was perceived to have been brought "in substance to the expert scientific judgement of the MMO, and not a challenge based on an error of law" (Ibid). Reference made to the Claimant (Goodwin Sands SoS) as "fundamentally misreading and misunderstanding" aspects of the consenting process appear to validate the findings presented of the qualitative interview analysis within the data scepticism theme. The substance of the appeal appears to argue a case for "topography in its own right" (Ibid). In other words, the Goodwin Sands should be protected in virtue of its intrinsic value. This is considered in the detailed analysis of the representations of Goodwin Sands presented in Chapter 8.

7.3.3. Accessibility of Information

The data scepticism evidenced above is linked to both the *quality* of the data provided in support of the application and the *accessibility* of this data. This sub-section explores data accessibility findings expressed within the research interviews.

The MMO's public register was seen as being confusing and inaccessible by the protest group. The protest group offered to email a collection of public register documents which had been uploaded to the public register shortly before the research interview was conducted. The reason given for this offer was the perceived concealed nature of this upload "because I had to ring them up and it was hidden in a folder that I would never have found" (DR:PG2). This offer was declined because the documents had already been accessed through the data collection process. Related to this, the protest group expressed a clear annoyance in the file size of the application documents and perceived this as a barrier to their accessibility: "you couldn't download it, you need

a laptop with a mainframe drive" (DR:PG1). The total file size for all documents included on the public register and downloaded for this research was 350MB.

Another area where access to the marine licence application process was expressed by the protest group was in the absence of earlier consultation on the planned Goodwin Sands dredge. This led to a level of suspicion regarding the project:

> "We didn't find out about this [project] until probably a year and a half after the idea had been mooted, which I think for the residents of East Kent is shocking. I think Dover should have been more open at the beginning. They should have been aware of the strength of feeling that the local community, and actually national people, have about the Goodwins. They kept it very quiet which is always suspicious. And I think maybe if they'd realised the strength of opinion then they wouldn't have wasted so much time and money on their licensing" (DR:PR1)

Undertaking earlier consultation was acknowledged by the Port of Dover as a potential method of increasing public acceptance, however the Port's perception that "they could do nothing right" (DR:DEV2) is persuasive. This can be perceived as either a stubbornness on the part of the protest group, or a 'smugness' on the part of Port of Dover, or indeed a combination of the two. Attributing blame for the breakdown in stakeholder relations is, however, unhelpful, and instead this part of the case study application process serves to evidence the importance of maintaining good developer-stakeholder relations throughout marine licensing determination.

Both the data scepticism and perceived access to information barriers evidenced within the research interviews raise the related theme of the role of experts within the licensing decision-making process. Findings related to this theme are presented in the section below in which data from interviewees with direct relation to the case study application are supplemented and expanded by data from additional interviewees.

7.4. The Role of 'Experts'

The role and definition of 'experts' emerged as a central theme during analysis of the interview data collected during the Goodwin Sands field work. The analysis and findings of these research interviews are presented below in three themes, as illustrated in Figure 7.23, and supplemented with additional case study data collected during fieldwork.

Reference	Interviewee Description	Experts and 'Expert' Knowledge - Cynicism	'Expert' v 'Non-expert' Data Providers	Protest Group Public Representation
DR:DEV1	Marine Licence Applicant Representative	✓	✓	
DR:DEV2	Marine Licence Applicant Representative	✓	✓	
DR:DEV3	Marine Licence Applicant Representative		✓	
DR:NSA1	Marine Licence Opposition - Heritage Local Expert	✓	✓	✓
DR:NSA2	Marine Licence Opposition - Town Councillor			✓
DR:PG1	Marine Licence Protest Group Founding Member	✓	✓	✓
DR:PG2	Marine Licence Protest Group Founding Member	✓	✓	✓
DR:PG3	Marine Licence Protest Group Supporter		✓	
DR:SA1	Local Conservation Charity Marine Officer		✓	✓
DR:SA2	National Marine Heritage Public Body Head of Marine Policy	✓	✓	✓
IR:CB2	National Conservation Charity Volunteer Coordinator	✓	✓	
IR:CB3	Local Conservation Charity Marine Officer		✓	✓
NR:MU1	Recreational Yachtsmen 1		✓	
NR:MU4	Recreational Yachtsmen 4		✓	
NR:RT2	Local Historian/Museum Curator - Maritime Heritage	✓	✓	
NR:RT8	Local Historian/Storyteller Public Event Organiser		✓	
NR:RT9	Local Tourism volunteer		✓	

Key:
Relation to Case Study Marine Licence:
DR = Directly Related; **IR** = Indirectly Related; NR = No Relation
Sector/Body:
CB = Conservation Body; **DEV** = Developer; **MU** = Marine User; **MS** = Maritime Safety; **NSA** = Non Statutory Advisor; **PG** = Protest Group; **RT** = Recreation and Tourism; **SA** = Statutory Advisor

Figure 7.23 Interview Participants and Emergent Themes – Experts and Representation

The themes explored in this section consider how expert knowledge claims are made, justified and accepted. Firstly, evidence of apparent public unwillingness to accept expert knowledge claims within the case study application is presented. This is followed by a wider discussion in which findings are presented regarding relevant marine data providers and their claims of expert or non-expert knowledge. Also evidenced in this section are findings related to the representativeness of the Goodwin Sands SoS protest group and other groups which claim to speak on behalf of wider public groups.

7.4.1. Cynicism Towards Experts and 'Expert Knowledge'

One of the key areas of concern raised in the public representations submitted during the application consultation was the potential for disturbance to war graves. It was therefore considered imperative for this thesis to engage with a senior representative of Historic England (HE) to gain insight into the statutory protection offered to such sites. As independent advisor to Government on matters pertaining to the historic environment HE are quoted as taking the “broadest interpretation” of the historic environment (DR:SA2). This includes “historic character associated with landscape, seascape [and] those heritage assets – buildings structures, monuments, archaeological sites, wreck, be it a vessel or aircraft – for which there is a particular importance identifiable against criteria, that a designated status may be afforded to it” (DR:SA2). The interviewee was keen to state the statutory remit within which HE work, noting that their “primary purpose is safeguarding sites, buildings, monuments, wrecks, which are of nation importance for which a designated status could be afforded” (Ibid). In short, there is an acknowledgement that the organisation “very much dwell[s] on the physical” (Ibid). Under the Ancient Monuments and Areas Act 1979, a site can only be designated as having historical importance in evidence of some kind of structure: “So it happens on land as much as at sea; the flint scatter associated with stone-age workings, because there’s no evidence of a structure cannot be designated” (DR:SA2).

The HE representative provided useful thoughts on the accumulation of wreck within areas of high maritime use – such as navigation channels into ports – and here it is argued that “navigation use contributes to its character” (DR:SA2). Further to this, “the fact that you’ve got a lot of records associated with navigation channels is obvious,

that's where vessels were trying [to get] safely from A to B, and they came to grief" (Ibid).

The remit within which HE provide their advice is clear from the interview data, and supplemented by the representations made by the organisation during the licence determination (GS4.9; GS14.11; GS28.4; GS37). The protest group perception of this advisor remained rather disparaging, and shows a clear distrust of these particular experts. The group credit themselves with the early consultation responses from HE which opposed the licence stating that they "pushed Historic England … and we just pushed and pushed and pushed and in the end they said 'OK'. Because originally Dover Harbour Board said we don't need a magnetometer survey [of the dredge site] it's fine there's nothing out there and Historic England said 'oh OK'" (DR:PG1). More blatantly cynical were comments made by the protest group describing a particular HE individual as being "a complete waste of space… and a car crash waiting to happen" (DR:PG2). Personal insults aside, this statement expresses a theme of distrust for experts within organisations and complements the scepticism expressed in Section 8.3.2.

Related to the mistrust of experts is the concern that local knowledge was being refuted by national 'expert' organisations and processes. A common *pro forma* response phrase within the public representations submitted within the application consultation exercises makes reference to the Deal Boatmen. The detailed maritime knowledge held by this locally infamous group of fisherfolk finds evidence in relation to other local maritime historical events non-related to the marine licence application and in contemporary anecdotal evidence of their 'expert' knowledge claims. The quotations presented in Figure 7.24 provide examples of these claims and the virtue bestowed on the boatmen.

Goodwin Sands Marine Licence Application Consultation Response	"Coastal erosion began after the previous rounds of dredging even though the authorities were warned by the highly regarded and historically knowledgeable Deal Boatmen that dredging would have a serious impact" (public comment 3.273, GS51)
Historical example	"The Deal boatmen, of which there were many at the time, said 'I wouldn't build a pier there'. *But who listens to the locals?* They built the pier anyway. And there have been at least 4 vessels crashed into it… And then in 1840 during the war, there was a boat here, it had been hit by a mine and the navy decided to sort of beach it, and the Boatmen said 'I wouldn't put that there'. *Who listens to the locals?* Not the navy because on the next high tide the Nora was being bashed into the pier and destroyed it for use" (NR:RT8, emphasis added)
Contemporary example	"Recently our lifeboat did an exercise where they put a dummy body in [the sea]… and did an exercise to work out where they might pick up the body depending on the tides and everything else. And they did it all scientifically. But they were being helped by one of the local boatmen. When he said 'where did you put it?' they told him, he said 'when was that?' he said 'you'll find that' and he told them the exact spot. So when they'd worked it out scientifically, guess where they found it? So if a Deal Boatman says you shouldn't do that I promise you, you shouldn't do it". (NR:RT8)

Figure 7.24 Who Listens to the Locals? Deal Boatmen Expert Knowledge Claims

These quotations provide anecdotal evidence of the Deal Boatmen possessing a local maritime knowledge far in advance of non-local or 'professional' organisational knowledge, and invite consideration of expert versus non-expert data providers and the legitimacy of their knowledge claims.

Additional comments directed at the validity of 'non-expert' knowledge claims regarding the impacts of the proposed dredge can also be evidenced. For example the perceived potential impacts to seals through disturbance and removal of Goodwin Sands breeding and pupping grounds are evidenced by the protest group based on the assertion that "we know, we've been told by a lot of fisherfolk that they'll be seal bodies on the beach" (DR:PG2). Local memory of previous dredge campaigns also falls within this category of cynicism towards 'experts' who do not possess 'local knowledge': "when they took an awful lot [of the Goodwin Sands aggregate resource] for doing the [Channel] Tunnel ... I remember being down on the beach at Kingsdown

and we had to have an awful lot of work there because the erosion had gone so quick you could measure it you know" (NR:RT9).

7.4.2. "Expert" v "Non-expert" Data Providers

Local memory and local maritime users provide an alternative view of the legitimacy of non-expert knowledge claims. These knowledge claims are based on anecdotal evidence and their validity cannot be proven within the paradigmatically positivist methodologies of EIA and professionally accredited organisations.

The case study marine licence decision has been made using "best available evidence" (GS43, p8; p33). This is contested by the protest group who challenge the validity of the data used within the assessment and who maintain that they have "proved … that that evidence is not the best" (DR:PR1). This invites MSP to question the interpretation of 'best available evidence'. Within this 'expert versus non-expert' theme the data originating from recreational marine users and non-statutory, voluntary and amateur organisations is valuable. This data appears to be regarded as 'less-than-best available data' within marine licensing decision-making processes.

Recreational experts

Recreational marine users provide insight in the validity of knowledge claims regarding the marine environment and marine development made by both historical and contemporary local mariners such as the Deal Boatmen. One recreational yachter interviewed as part of this research explained their experience that "the wind shadow of a windfarm is 200km long! You can measure temperature differences at the front of a wind farm and behind it" (NR:MU1). This experience finds some support in recent academic literature (Miller & Keith 2018).

Aside from recreational boatmen, cross channel and long distance swimmers provide strong claims to detailed marine knowledge not considered 'expert' within the EIA process. The completion of long distant swimmer and activist Lewis Pugh's English Channel swim in August 2018 is a well-publicised example of this (Lewis Pugh 2019). Mr Pugh has publicly supported Goodwin Sands SoS and spoke on marine environmental protection at the Conservative Party Conference in September 2018, providing his account of marine pollution gained during the long distance swim (Goodwin Sands SoS 2018). The Port of Dover representative dismissed Mr Pugh's

campaigns as “he’s a bit like Marinet [the marine arm of Friends of the Earth], he’s opposed to anything in the marine environment” (DR:DEV3).

The East Kent Coast forms the main training area for Cross-Channel Swimmers and the Channel swims themselves provide evidence of an activity in which participants display highly proficient understandings of currents, tides and other environmental factors pertaining to the marine environment (NR:RT2). It is estimated that over 1400 solo Channel swims have been attempted in addition to the numerous relays and unrecorded successful or unsuccessful attempts (Dover Museum NDb; Channel Swimming Association 2019; CSPF 2019). The knowledge displayed by Channel swimmers and their support staff has a strong validity claim due to the challenge posed by these attempts. The activity itself provides evidence of the recreational use of the East Kent Coast and English Channel areas. This finds no mention within the human activity context sections the case study marine licence ES. Evidence of the importance of this activity for the local area is found within the local custom whereby successful solo Channel swims are immortalised through graffiti on the walls and ceilings of a Dover public house as presented in Figure 7.25 (NR:RT8).

Figure 7.25 Swim the Channel; Graffiti the Wall

Maritime safety experts

The maritime safety of yachters, Channel swimmers, and other marine users is supplied by the Royal National Lifeboat Institute (RNLI) who relies on voluntary staff to run the lifeboat service around East Kent. Within Kent RNLI only the cox of one of the larger lifeboats and a mechanic are employed and salaried (IR:MS1; IR:MS2). Volunteers follow a strict training protocol of "competency based training" (IR:MS2) and show their commitment to maritime safety through their length of service in which "some people do 3 years others might do 50" (IR:MS2).

In addition, the RNLI lifeboat volunteers the National Coastwatch Institution (NCI) operations a lookout posts in Folkestone which has gained the Queens Award for Voluntary Service (QAVS). Reporting to Dover Coastguard, the NCI Post volunteers "keep a public eye on what we can see out here" (NR:MS1). The origins of the NCI Post evidence the importance of these local volunteers: "There is an old Coastguard station which was closed down and then very shortly after that two fishermen lost their lives in sight of that and then the villages just decided to make up their own watch station which has developed into the NCI" (MR:MS1).

Marine conservation experts

The case study field work found many examples of the importance of non-expert data within marine conservation. Much of this is organised by the Kent Wildlife Trust (KWT) in association with the national Marine Conservation Society (MCS). Under the 'Seasearch' programme offshore data collection surveys are "delivered locally by the Wildlife Trust" through the organisation of volunteers who hold advanced diving qualifications (DR:SA1). The volunteers "pay to come on the dives and then they do the seabed surveys" (Ibid). The data collected from volunteer dive surveys is quality checked for its compliance with arranged methodologies in collaboration with Natural England, "to ensure that if we're collecting data it's going to be in a way that they are going to be happy to use" (Ibid). Data validity here appears important for volunteer satisfaction: "if we've got all these volunteers who want to collect this data we need this data to be used" (Ibid).

The use of volunteers to aid the statutory nature conservation function of Natural England was also identified by volunteer leaders who expressed their awareness that "money isn't available for them to go off and do [survey work] and we're like 'we've got

a team of volunteers, many of whom are real experts in identifying things, we could use them to do the monitoring within your protected sites'" (DR:SA1). The findings from engagement with KWT illustrate the importance and potentially missed opportunity presented within this group of local experts regarding the accessibility and use of best available evidence within marine decision-making.

The volunteer survey data is validated by MCS staff and uploaded onto the National Biodiversity Network (NBN) Atlas (NBNatlas.org). This publicly accessible resource holds a catalogue of all species and habitats located through recorded sightings. Limitations to the volunteer Seasearch diver network and to dive locations may lead to the absence of species recorded in specific areas. As absence data is not recorded, the lack of species within a particular area within the NBN Atlas may be due to the absence of species, or due to the absence of dives conducted. (IR:CB2; IR:CB3). This limitation is important to note, however the overall data collected remains of high value for marine decision-making provided this caveat is understood. In discussing the validity of the Seasearch data within marine licensing decision-making one interviewee made reference to the potential bias within the 'expert data' utilised by the MMO:

> "[They'll] commission Cefas to do a survey because they're the professionals. I get very exercised about the whole Seasearch data, you know 'they're a bunch of amateurs'. Well we're actually volunteers. We're not getting paid for it. That's the only difference [and] it doesn't make our data any less accurate or any less valuable… we have no agenda other than to record everything that's out there with our geeky badge on." (IR:CB2)

A clear distrust of commissioned data studies is also illustrated here, with the accusation that "it's like the drug companies isn't it, you can always pay enough money to do a study that proves that your drug is safe" (IR:CB2).

Wider citizen science networks are also encouraged by MCS staff including participation through various marine conservation online and mobile apps (Figure 7.26). According to the MCS, the apps show "how easy science is and how people can get involved, for example, when the HLF [Heritage Lottery Fund] money ends how people can carry on themselves" (IR:CB2).

Name	Description
#2MinuteBeachClean	App in which the creators "believe that every piece of litter removed from the beach matters. So it doesn't matter if you do 2 minutes or 20" (Beachclean 2018)
Crab Watch	Marine Biological Society app which states that "Warming seas, non-native invaders and human activities are all affecting our marine environment. Records of marine life are needed to inform decision-makers, to track changes, to find out why things are changing and, let's not forget, because recording is fun!" (MBA ND)
The Great Eggcase Hunt	Established by The Shark Trust in 2003 and encouraging the public to hunt for, and record, shark, skate and ray eggcases on UK beaches has resulted in "an extensive and ever expanding database of eggcase records, which continues to provide us with crucial information about the distribution of British sharks, skates and rays" (Shark Trust ND)
iRecord	Feeds data into the NBN Atlas is "designed for individuals to do adhoc recording and it's verified… somebodies looked at it and you need a photo with it that gets verified" (IR:CB2; BRC ND)

Figure 7.26 Citizen Science through Online and Mobile Apps

Maritime Heritage Experts

The amateur curator of "the world's largest Battle of Britain collection of memorabilia" has been instrumental in providing Goodwin Sands SOS with material for their campaign (DR:NSA1). Digging deeper into the validity of the list of lost aircraft over the Goodwin Sands the curator explained that he "was only given two weeks to come up with the list so it was a very quick list... If I had more time we could come up with a lot more evidence to prove that those aircraft are potentially in the area" (DR:NSA1). The information used originated from "eye witness accounts, RAF records, squadron records, every record I could pick to hand really, so I've got at least one account somewhere that states that an aircraft was in or around that vicinity" (Ibid).

The 'expert' status of Battle of Britain Museum has been questioned within the case study marine licence application determination. Attempting to establish the status of the knowledge claims made by the Museum's owner and curator raise several points of contention. With no formal qualification the curator provided a brief account of his entry into the Battle of Britain research field in which he "started off as a 10 year old boy with no knowledge and researched heavily the subject" and which culminated in

the award of MBE (DR:NSA1). Lack of support from wider funding bodies ("We've been turned down twice by the lottery… possibly because we're amateurs… I'm not a qualified curator I cannot be the curator within the lottery process" (Ibid)) serves as both a frustration for the museum and a critique of the funding award criteria and wider 'expert by qualification' paradigm. However this self-identification as 'amateurs' is juxtaposed with the many calls for the curators 'expert knowledge' to provide input into television documentaries: "if anybody does anything on the Battle of Britain they usually find their way to my doorstep" (DR:NSA1).

7.4.3. Protest Group Public Representation

A final emergent theme within the qualitative research findings regarding the role of experts within the marine licensing decision-making system, is the public representation evidenced within stakeholder groups. Findings in this theme focus heavily on the claims made by Goodwin Sands SoS that they are representative of wider local public opinion.

In pre-interview email correspondence the protest group expressed their desire to "set up a charity, the Goodwin Sands Conservation Trust… to preserve the sands in situ for people to enjoy" (DR:PG email 23 May 2018). Opinions and perceptions regarding the protest group from others directly, or indirectly, involved within the Goodwin Sands application process were varied. The organised nature of the protest group was mentioned by several interviewees (DR:SA1; DR:NSA1; IR:PG3). Some interviewees expressed this in more hostile terms stating that "they are well mobilised but really it's only really the two or three of them that are doing anything but yeah they've made it their life's work that's for sure" (DR:DEV3). This opinion also raised concerns of the protest group gaining disproportionate recognition within the application process: "there are groups of people that make a lot of noise and perhaps as a result get more recognition compared to other groups who should be getting equal or as much" (DR:SA1, also DR:NSA1).

A repeated theme within interview findings is the support the protest group had gained from local people who were "really concerned about [the dredge] because a lot of local people were there when they dredged before and they know the impact it had and the length of time it took for things to recover" (DR:SA1). Whilst the protest group have

been vocal in attaching themselves to other statutory and non-statutory organisations third party stakeholders expressed a desire to maintain distance:

> "We've deliberately stayed out of that because out objection was based on other things, and it was important that as a [public facing organisation] we remain utterly professional and we're approaching it from the way from which we would normally approach things" (DR:SA1)

The resource intensity of running Goodwin Sands SoS as a campaign group was linked to the retired status of the campaign organisers. This was perceived by the group as being used to demerit the validity their concerns in that the Port of Dover have "always tried to dismiss us as a bunch [of] middle aged housewives who don't know what we're talking about and we've both had good careers, we're not stupid, and we're not doing it actually on our own, we're taking professional advice" (DR:PG2) The perceived hobby-like approach towards campaigning is, however, supported by the evident enjoyment gained through managing the campaign. Collating information for use in letters of objection resulted in "a lovely couple of afternoons" spent undertaking archival research (DR:PG1).

Interview discussions regarding the relationship between Goodwin Sands SoS and its supporters resulting in findings which invite questions over the level of public support and representation the group had. Examples were given of individual supporters requesting to remain anonymous within the campaign including the comment that one is "working for us incognito because [they] work for the government" (DR:PG1). The protest group organisers admit that there is uncertainty over the number of members within the wider support group with the 4,000 members of a Facebook group was used as a rough estimate (DR:PG1, DR:PG2). The self-selecting nature of Facebook groups, and the inclusion of people wishing to *follow* rather than *support* the group, was raised with one interviewee stating that "it is interesting there are a lot of people who watch and never comment, which is nice to know because quite a lot of people don't comment… but you get people in the street that come up to us and say we're on your Facebook page and we don't say anything but we're watching and you know you're got our support" (DR:PG1, DR:PG2). An online petition created by the protest group had, at the time of interview, attracted 15800 signatures of which "only actually 5000 want to hear back from us" (DR:PG1). It is unknown "whether some of that 5000 is the same as the Facebook group" (Ibid).

A clear frustration was evident within the protest groups' organisers regarding the level of engagement from their supporters:

> "It's very hard actually to get people to engage actively. I mean we've had so many people saying 'I'll give you support' or 'I've got this idea' but they are not prepared to go any further and then when you write and ask them 'can you..?' it's 'I'm really busy at the moment and I can't'" (DR:PG1).

This appears consistent with the 'Willingness to Pay' literature discussed in Chapter 5, Section 5.4, of this thesis. A signature on a petition is resource-minimal and anonymous whereas undertaking direct action, fundamentally modifying behaviour or donating money to a cause requires additional time, resource and potential loss of anonymity or reputation. The prevalence of 'copy and pasted' consultation responses using protest group text is also evidence of this – it takes seconds to forward an email, whereas to research and write one's own response takes time.

Interview data did provide some evidence of wider public support for the protest group although this was also mediated with a consideration of the motivations behind the campaign. The opinion voiced was that "it seems to be that they want to try to campaign really and that they just want to take on a giant and try and that's that really" (DR:NSA1). Others who supported the group did so on moral grounds: "It should be left alone, it's a grave… it's a war grave, we're all humans, nobody wanted us to go to war" (DR:PG3). The importance of the Goodwin Sands for the identity of East Kent was also voiced in support for the protest groups' work: "this Goodwin Sands [dredge] is very very much felt in Dover; you do not touch it! But Dover Harbour Board and the MMO have just rode roughshod over everything" (DR:NSA2).

7.5. Chapter Conclusion

This chapter has provided the findings of the Goodwin Sands case study marine licence application. The analysis found clear tensions between an increasingly organised and powerful local public and the applicant, regulator and the process itself. The public representations submitted in objection to the marine licence are striking in their distrust of the decision-making process and the organisation managing it. Perceived inaccessibility of data and the evidenced misunderstandings present within representations regarding the EIA conclusions invite the need for further consideration

regarding how public engagement within the marine licensing process can better address the concerns raised.

The successful elevation of the protest group into a position of power within this determination process is evidenced by the multiple meetings held between them and the MMO during the application process. The findings presented within this chapter evidence the experience felt by key actors within application process and the contributory factors for these experiences. It is evident that distrust is present for actors on both sides of the argument and that the licence application occurred in a complex geographical and socio-political context not adequately addressed within the applications impact assessments.

The cynicism and scepticism shown towards the developer, regulator and other professional and statutory bodies, is hard to overcome given the challenging historical context of the relationship between the Port of Dover and the wider community. The dismissive and at times hostile treatment of the protest group acts to further distant stakeholder relations. The use of 'best available evidence' within the licensing process appears as a key finding and point on contention for public objectors and the protest group. This provides an opportunity to consider the value and legitimacy of 'non-expert' data and how this could be utilised within the application and decision-making process.

The public and protest group perception of the marine licensing process itself resulted in a cynicism which makes trust difficult to achieve. A clear example is found in the minutes from the MMO/Goodwin Sands SoS House of Commons meeting evidenced in Section 8.3.2. The statement made regarding the fact that marine licences are determined based on 'best available evidence' rather than through popular vote appears to question the democracy of the process. Here again the technocratic decision-making process is critiqued by the protest group. This demands further attention regarding the publicness of a technocratic development management system devoid of elected representatives making planning decisions. This is discussed in Chapter 9.

From the small sample of research interviews and the large number of marine licence representations submitted within the application consultation rounds it is evident that the protest group do find strong support in some local residents. However the presence of misinformation and rumours within the publics engaged in the marine licensing

process does suggest misunderstandings occurring within both the application supporting information and the campaign literature.

It is clear from the findings presented within this chapter that the Goodwin Sands find numerous expressions within the stakeholders and publics engaged in the marine licence decision-making process. The licensing process evidenced within this case study appears to focus its attention of the representations of the area produced by the applicant. The evidence presented in this chapter of non-expert, volunteer or amateur knowledge of the case study area appears delegitimised through its lack of attention within the decision-making process. Whilst the claims specifically made regarding the Goodwin Sands may indeed be irrelevant considerations within the licensing process it is the *treatment of these claims* which impacts the publicness of the process. Gaining an understanding of the multiple representations which are produced within a specific space is therefore a valuable exercise for controversial licensing decisions. The analysis and findings presented in Chapter 8 consider the Goodwin Sands as *place* rather than the *marine licence application* and evidences how omitting multiple representations of the Goodwin Sands from the decision-making process amounts to ideologically mediating space. As such Chapter 8 provides evidence of the utility of the Production of Space thesis within marine licensing decision-making.

Chapter 8. Representations of Goodwin Sands

8.1. Exploring the Production of the Goodwin Sands through its Representations

This chapter presents primary research findings in relation to the research question (RQ1) '*what is publicness of the sea?*' through the consideration of the Goodwin Sands as a public space socially produced through perception, conception and lived experience of the area.

The substance of this chapter presents findings regarding the multiple representations of the Goodwin Sands which appear contrary to the conceived space produced within the application EIA, discussed in Chapter 7. The chapter therefore exposes the multitude of meanings and representations within the production of the Goodwin Sands social space. These findings invite discussion regarding the extent to which absence of these within the licensing process has detrimental impact of the publicness of the Goodwin Sands. Findings are presented of both historical and contemporary representations, and demonstrate the productive nature of this sedimentation of meanings laid down on the abstract Goodwin Sands through events, stories and myths.

Case study fieldwork data is also presented in relation to the perceived space and lived experience of the Goodwin Sands. The findings here demonstrate the necessary impossibility of presenting these moments of social space within documentary text or imagery.

The findings presented in this chapter are based on fieldwork imagery and experience, documentary and archival accounts, and qualitative interview data. The interview findings are considered in the themes outlined in Figure 8.1.

Reference	Interviewee Description	Space for Recreation	Space for education	Space for other public uses	Dangerous place/ barrier	Myths and Stories
DR:DEV1	Marine Licence Applicant Representative	✓		✓		
DR:PG1	Marine Licence Protest Group Founding Member			✓		✓
DR:RT1	Goodwin Sands Tour Operator	✓			✓	
DR:SA1	Local Conservation Charity Marine Officer		✓	✓		✓
IR:MS1	National Maritime Safety Charity Volunteer				✓	
IR:MS2	National Maritime Safety Charity Station Manager	✓	✓		✓	
IR:MU4	Goodwin Sands Recreational User (past use)	✓				
NR:MU5	Goodwin Sands Recreational User (present use)	✓		✓		✓
NR:MU6	Goodwin Sands Recreational User (present use)	✓		✓		✓
NR:MU7	Goodwin Sands Recreational User (present use)	✓		✓		✓
NR:RT1	Local Authority Tourism Manager	✓		✓		✓
NR:RT3	Goodwin Sands Public Event Organiser	✓			✓	
NR:RT8	Local Historian/Storyteller Public Event Organiser	✓		✓		✓
NR:RT9	Public coastal walking festival participant	✓				

Key:
Relation to Case Study Marine Licence:
DR = Directly Related; IR = Indirectly Related; NR = No Relation
Sector/Body:
CB = Conservation Body; DEV = Developer; MU = Marine User; MS = Maritime Safety; NSA = Non Statutory Advisor; PG = Protest Group; RT = Recreation and Tourism; SA = Statutory Advisor

Figure 8.1 Interview Participants and Emergent Themes – Representations of Goodwin Sands

The case study marine licence application documents also form part of the analysis presented within this chapter. Where case study marine licence documents are cited the referenced documents are listed in Appendix 4C. Images reproduced within this chapter are the author's own, unless otherwise referenced.

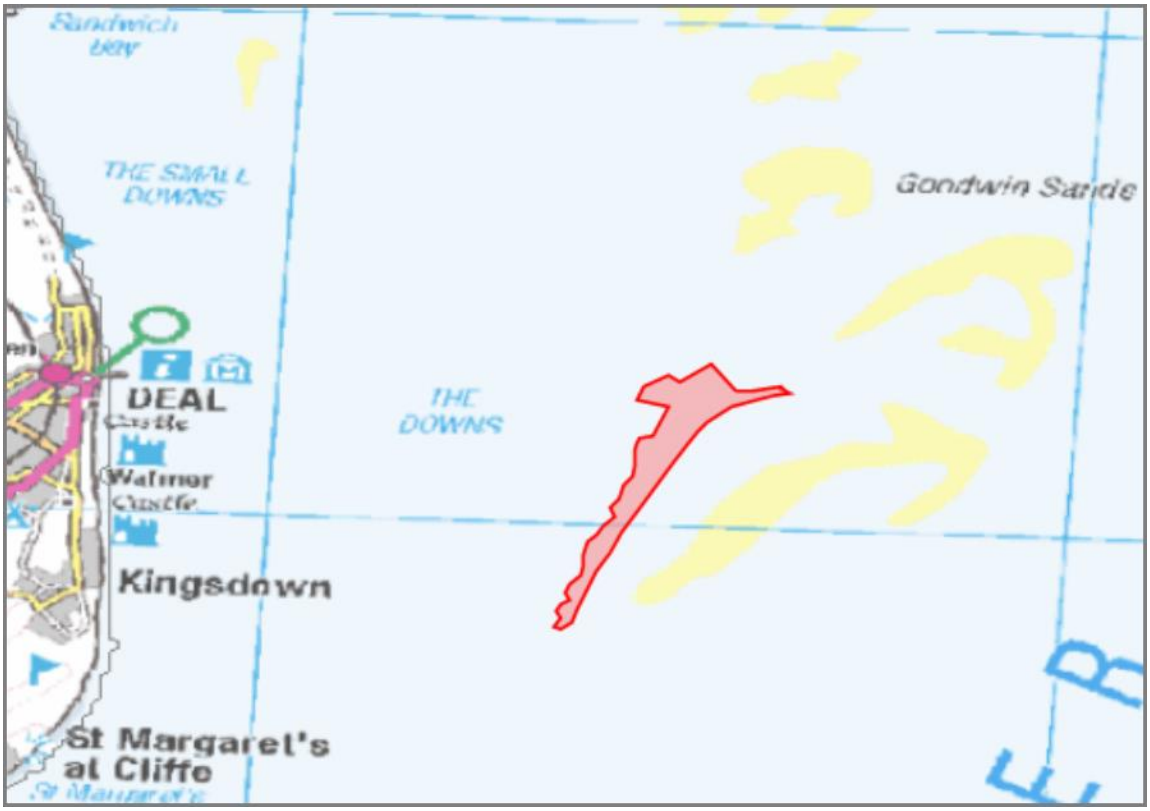
8.2. Goodwin Sands Marine Licence Application Representations

The case study marine licence application presented in Chapter 7 provides multiple representations of the Goodwin Sands both in support of the application, and through the public objections submitted against it. The language of the marine licensing process is noted here in which representations of marine space are presented within the *public representations* submitted within the consultation process. This use of the term *representations* within the decision-making process appears to confirm Lefebvre's assertion that conceptual space – expressed through its representations – is "the space of scientists, planners, urbanists, technocratic subdividers and social engineers" (Lefebvre 1991, p38). The domination of this conceptualised space is expressed in "verbal (and therefore intellectually worked out) signs" (Ibid, p29). The representations of Goodwin Sands presented within this section have been *used to work out* – determine – the outcome of the marine licence application.

8.2.1. Goodwin Sands EIA Representations of Space

As 'the space of scientists [and] planners' the inclusion of conceived space conceptualisation within the case study marine licence process is uncontentious. In this sub-section the representations used within assessment and decision documents are presented to illustrate how they are used in an attempt to *produce* a space for which development is not only suitable, but furthermore desirable. From these representations the desire to *ideologically mediate* the Goodwin Sands to produce the conditions in which development is part of the concrete meaning of the social space can be evidenced.

The case study application EIA Consent Decision Report refers to the dredge project as "Aggregate extraction Area 521 – Goodwin Sands" (GS43, p1). The description of the project continues with the dredge site defined as "Area 521 located approximately 5km offshore of Walmer, Kent in an area named Goodwin Sands" (Ibid, p5). The accompanying location chart, reproduced in Figure 8.2, provides geographic context to the location of the dredge site in relation to both the intertidal Goodwin Sands sand banks and the East Kent coast.



GS43, p5

Figure 8.2 EIA Consent Decision Report Proposed Dredging Location (Area 521) Absent of Scale

The location chart does not include a scale. This limits the utility of this chart in understanding the site location context. The intertidal nature of the sandbanks is absent within this project description and the lack of scale makes understanding this context challenging.

Accompanying the consented marine licence, the EIA Decision Report references the Non-Technical Summary (NTS) of the application's Environmental Statement (ES) in which further project details can be found (GS43, p6; GS3.1, pp8). As such, this regulator document relies on applicant representations to describe the Goodwin Sands and justify its decision to permit development within this space. The NTS introduces the Goodwin Sands as the location of the dredging activity (development site) in physical terms. Specific reference made to the area as a, primarily financial, high-value resource:

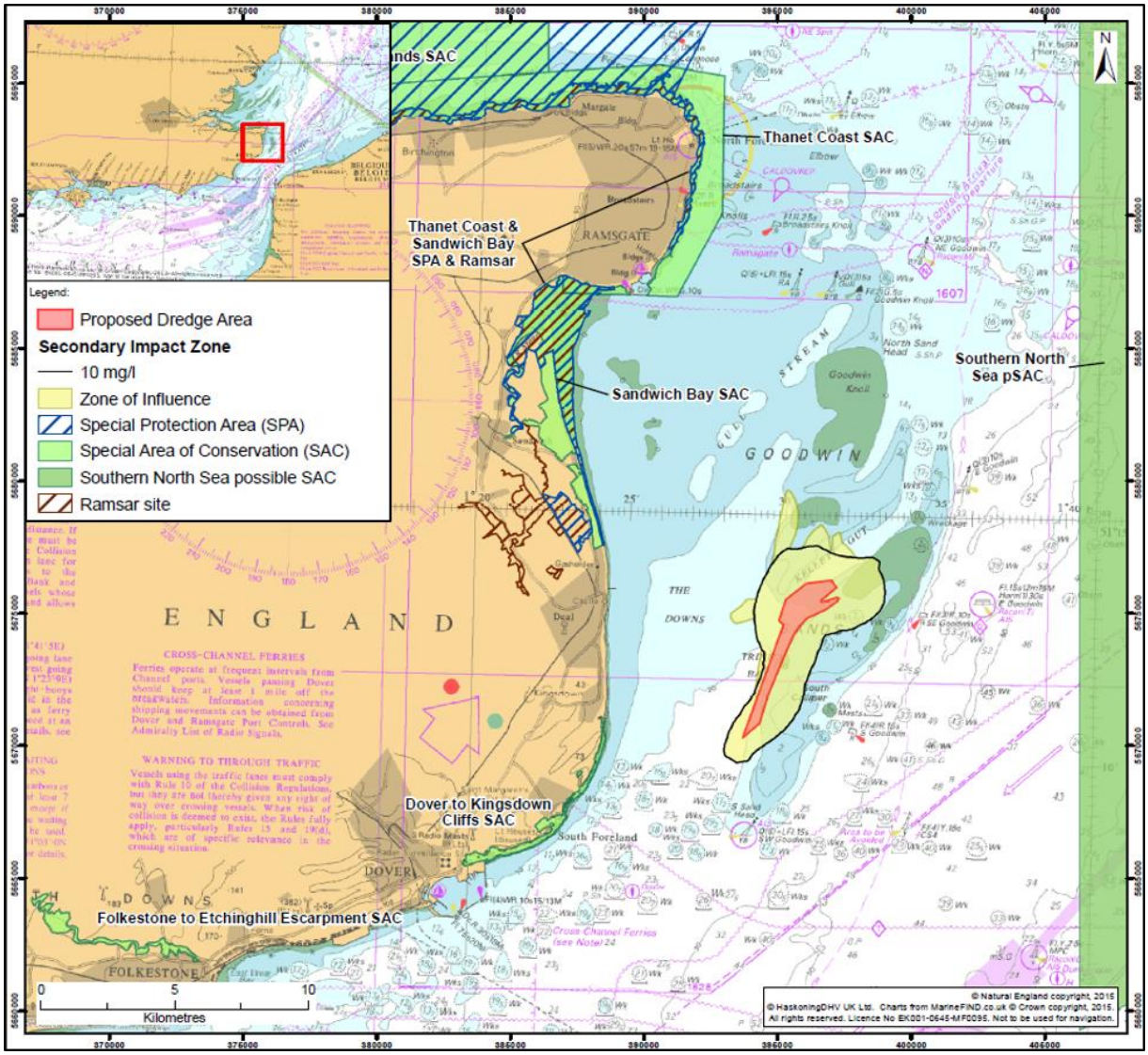
> "The location of the proposed dredge area is within the South Goodwin Sands sandbank system. The Goodwin Sands sandbank system is a dynamic, highly

> mobile environment that contains significant volumes of aggregate resource of various grading for coastal defence, coastal development and construction to supply a range of markets and projects" (GS3.1, p1)

In this quotation the Goodwin Sands is presented through a reductive description in which the multiple meanings and spatial moments of the Goodwin Sands as *place* are reduced to purely building material. This quotation, therefore, provides a strong justification for the use of a production of space analysis of the Goodwin Sands.

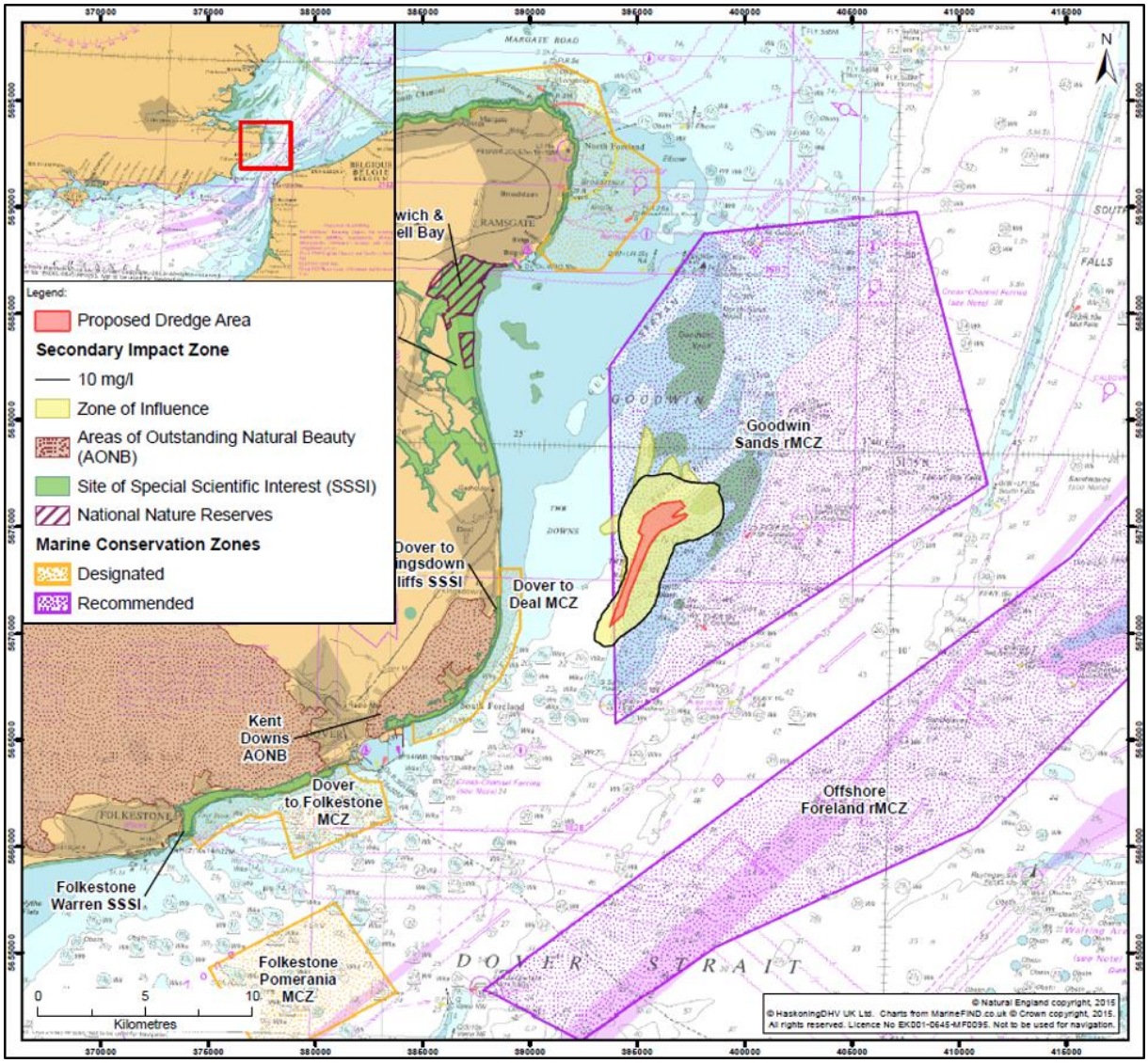
The "existing environmental conditions within [the application] study area that might be affected by the proposed dredging scheme" are presented in Section 5 of the NTS (GS3.1, p8) and are stated as limited to the "*geographical extent* of the study area" (Ibid, emphasis added). The NTS provides multiple representations of the Goodwin Sands within the topic areas aligned to the main EIA document conclusions. Taking these NTS written descriptions and visual representations as the licence application context invites reflection on what is absent from this conceptualisation of marine space, in which the space itself is conceptualised in support of the proposed development. In other words *what is left out of its representation?* The representations of (marine) space present within the application appear "tied to the relations of production and to the 'order' which those relations impose, and hence to knowledge, to signs, to codes and to 'frontal' relations" (Lefebvre 1991, p33). Ordering the Goodwin Sands locational space in this way appears to devalue the physical space to "merely the raw material out of which the productive forces of a variety of social systems have forged their particularly spaces" (Ibid, p31).

The representations of space displayed in this application provide substance to the predominance of conceived (marine) space within the (marine) planning regime (Ibid, p45) and the linkages between conceived space and spatial economy are clear within the statement of need discussed above (Ibid, p56). Steinberg's (2001) consideration of the production of marine space is useful here too, with the dominant discourse proposed of the Goodwin Sands as resource provider (Steinberg 2001, p20). The written representations of space found within the NTS are presented in Appendix 8A and NTS graphical representation are presented in Figures 8.3 to 8.6.



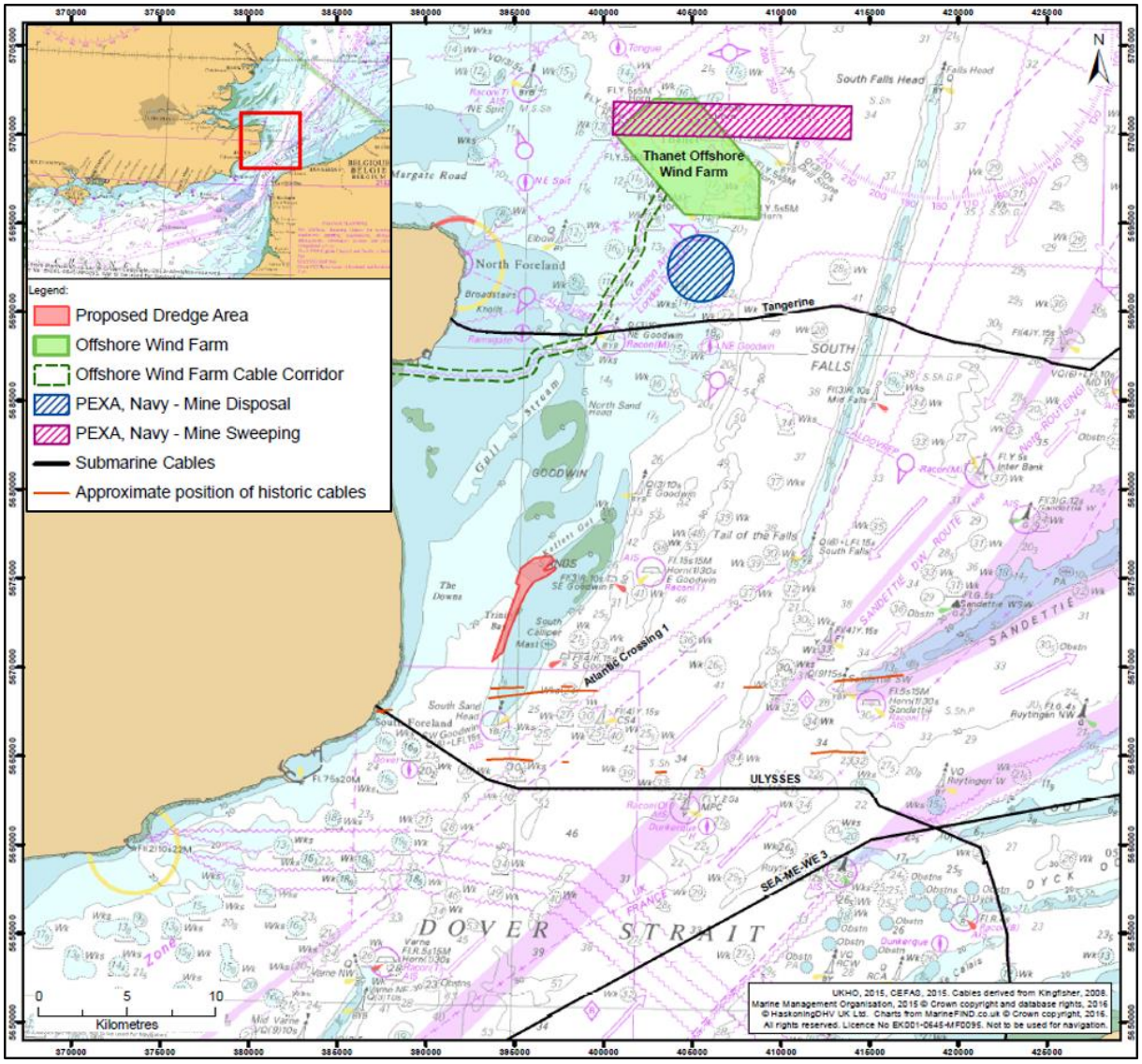
GS3.1, p9

Figure 8.3 Goodwin Sands NTS Descriptions – International Nature Conservation Designations



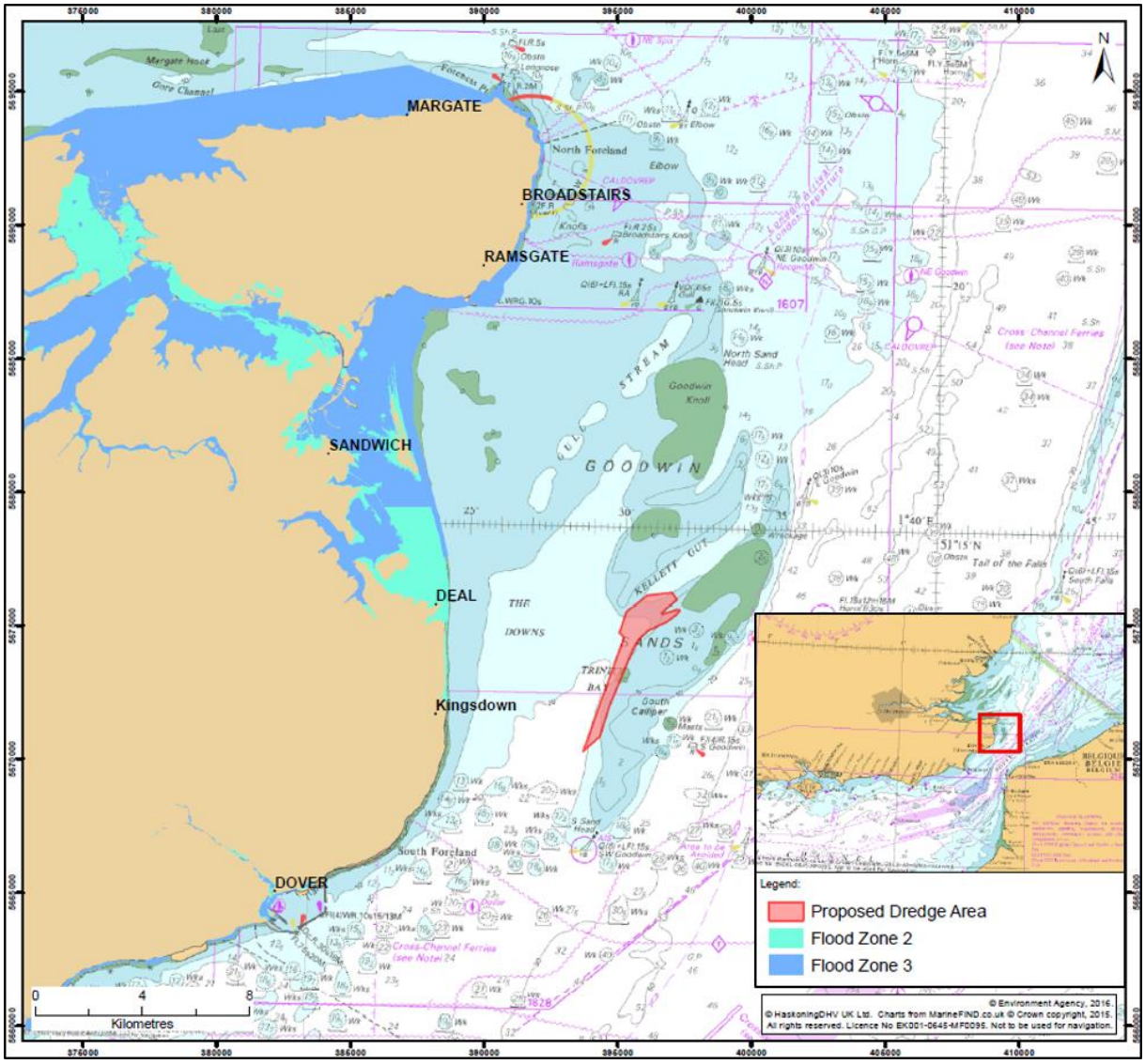
GS3.1, p10

Figure 8.4 Goodwin Sands NTS Descriptions – Nationally Protected Sites



GS3.1, p19

Figure 8.5 Goodwin Sands NTS Descriptions - Other Users of the Sea



GS3.1, p21

Figure 8.6 Goodwin Sands NTS Descriptions – Flood Zones

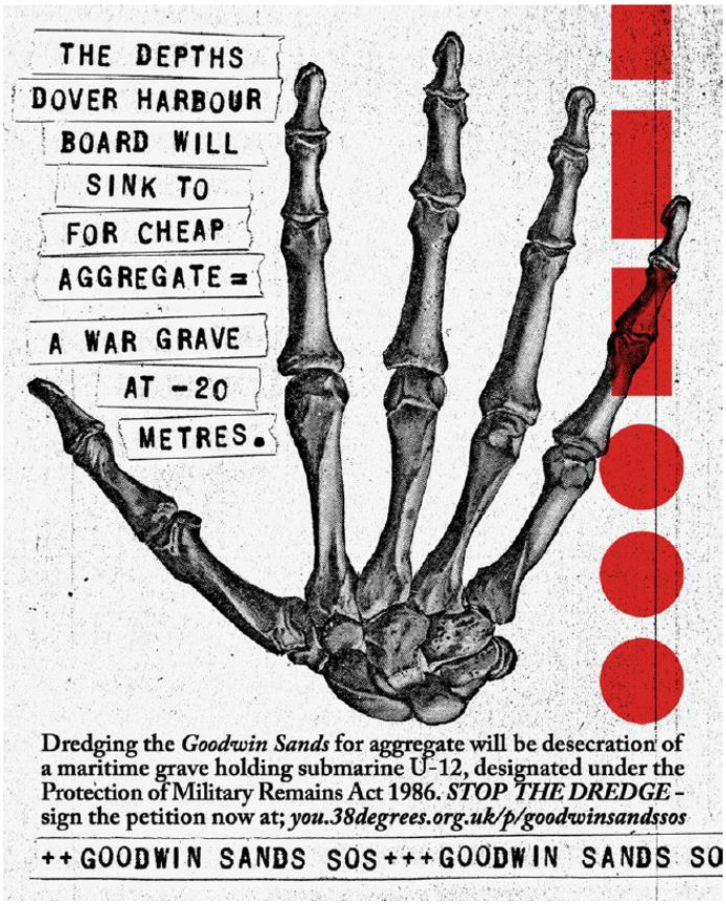
8.2.2. Representations found within the Case Study Marine Licence Objections

It is evident from the findings presented in Chapter 7 that numerous objections were raised to the conceptualised space presented within the applicant's Goodwin Sands representations. These objections, presented in Section 7.2.3, are not reproduced here to avoid unnecessary repetition. Instead two key objector representation themes are explored namely the Goodwin Sands as a war grave and the Goodwin Sands as cultural landmark.

Goodwin Sands as a war grave

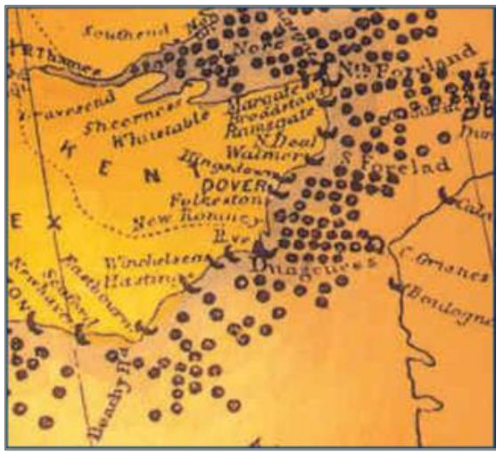
The conceptualisation of the Goodwin Sands as war graves was not stated as a founding principle behind the Goodwin Sands SoS protest. This representation became apparent to the protest group during the first public consultation on the marine licence from anecdotal evidence from "one of the ladies [who] wrote and said my 90 year old Dad has got colleagues who died out on the Goodwin Sands in the RAF" (DR:PG1). Contact with local historians ensued resulting in attempts to pursue objection to the dredge on the ground of disturbance to war graves and noncompliance with the Protection of Military Remains Act 1986 (POMRA) (Ibid, DR:PG2). Representations of the Goodwin Sands depicting it as a war grave are found in several formats within the public objections submitted as part of the application consultation. These representations also conflate war graves with wider shipwreck in the area. Examples of these representations are presented in Figures 8.7 and 8.8.

In addition to these graphical representations, Appendix 8B provides a detailed, and lengthy, account of Battle of Britain losses over the Goodwin Sands. Its inclusion, in full, is used to demonstrate the significance of feeling evidenced through its inclusion in the public representations. Additional analysis of these examples follows their presentation.

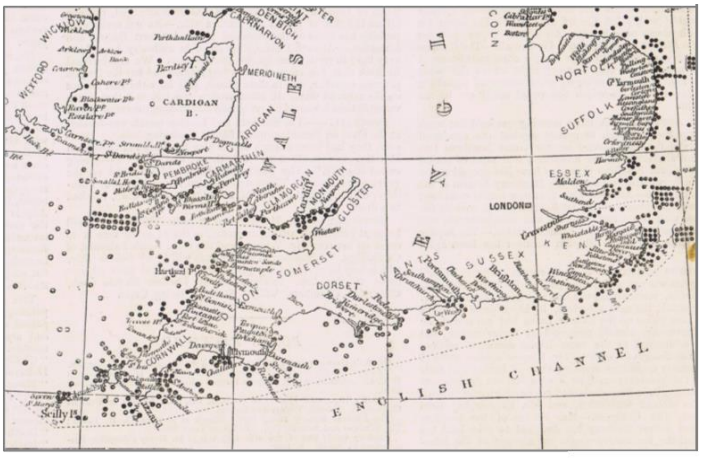


GS15; Public Representation 264

Figure 8.7 Representation of Goodwin Sands as War Grave



First 6 months 1863



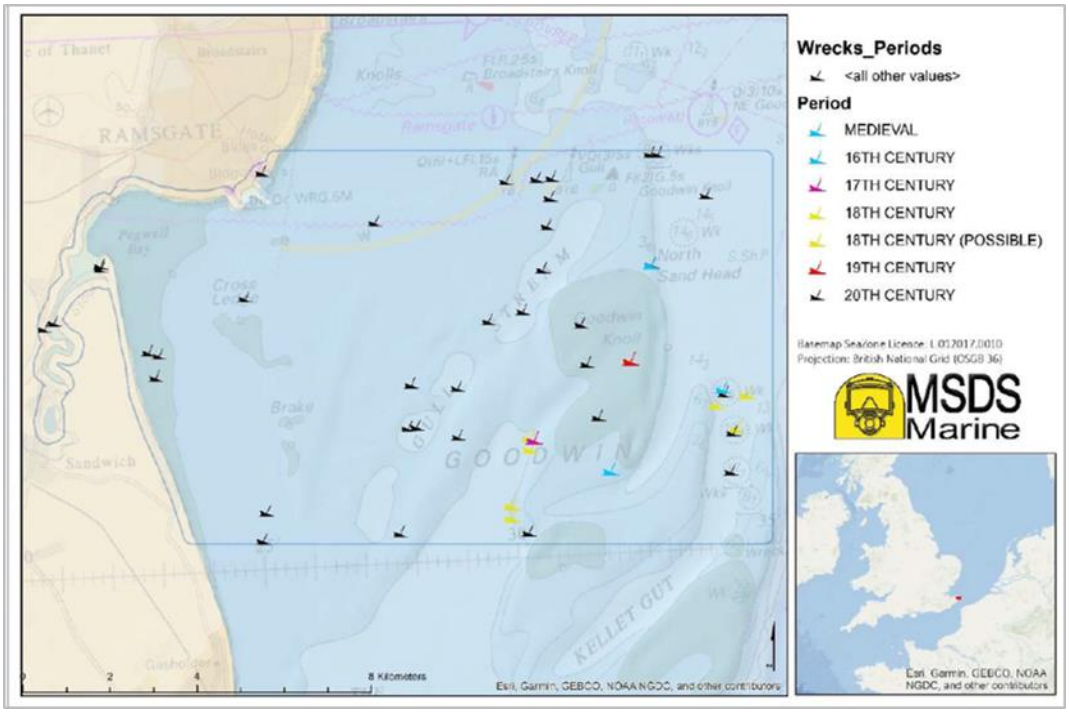
1876-1877

GS5 Public Representation 570

Figure 8.8 Nautical Archaeological Society Training Material – Goodwin Sands Known Shipping Losses

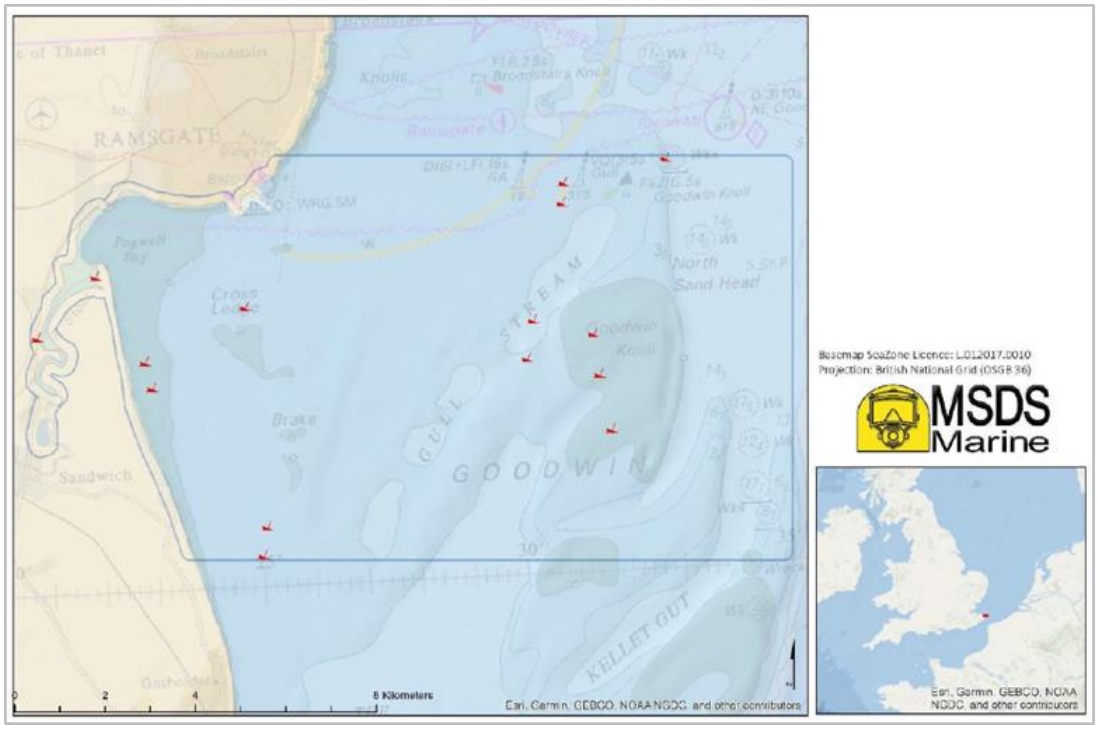
These representations, while public and/or amateur in origin, display the use of ideological mediation as an attempt to exert power over decision makers. Their content is selective and somewhat misleading. In Appendix 8B missing pilots are listed alongside those known to be safe during Battle of Britain aircraft losses. No mention is made to any recovery of wrecked aircraft. The protest image in Figure 8.7 relies on this missing pilot list to evidence its assertions. The known shipping losses charted in Figure 8.8 provide no details on the recovery of these wreck.

These representations of Goodwin Sands as a war grave, or wreck site, are juxtaposed with those made by Historic England. This was evident within research interviews presented in Chapter 7, Section 7.4.1, regarding public cynicism towards experts within the case study marine licence application process. Additional representations of the Goodwin Sands produced outside of the licence application process by Historic England provide context which limits the appearance of wreck and specifically designated or war related wreck within the case study area (Evans & Davison 2019). These are presented in Figures 8.9 to 8.11.



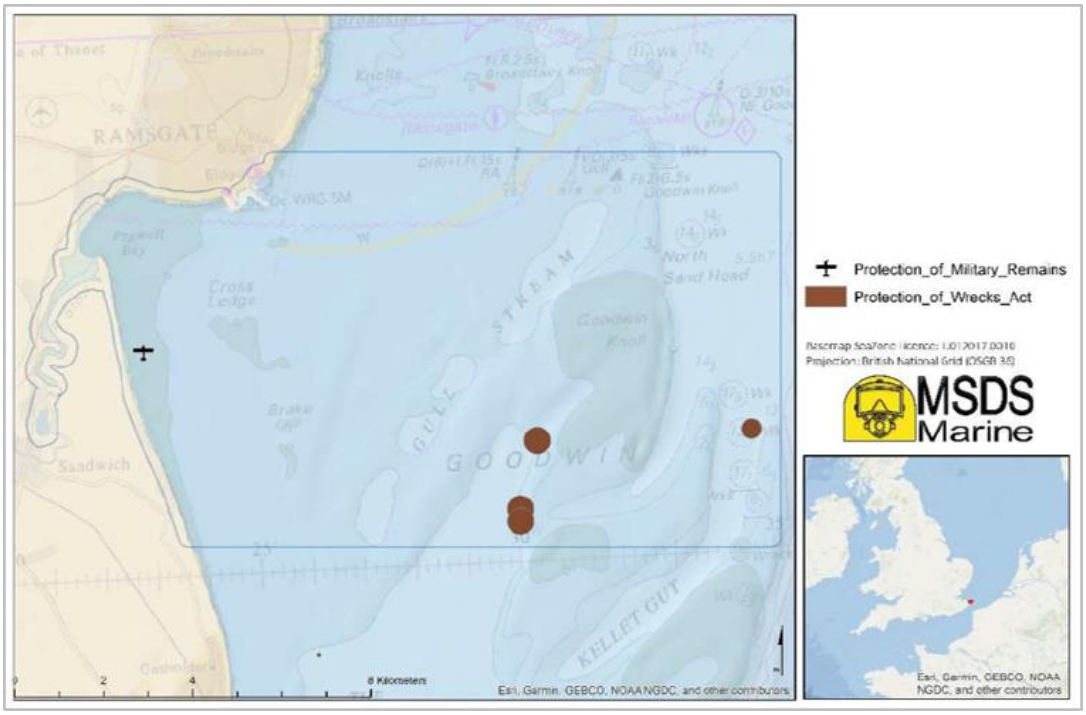
Evans & Davison 2019, p52

Figure 8.9 Distribution of Goodwin Sands Wreck Sites of Different Periods



Evans & Davison 2019, p53

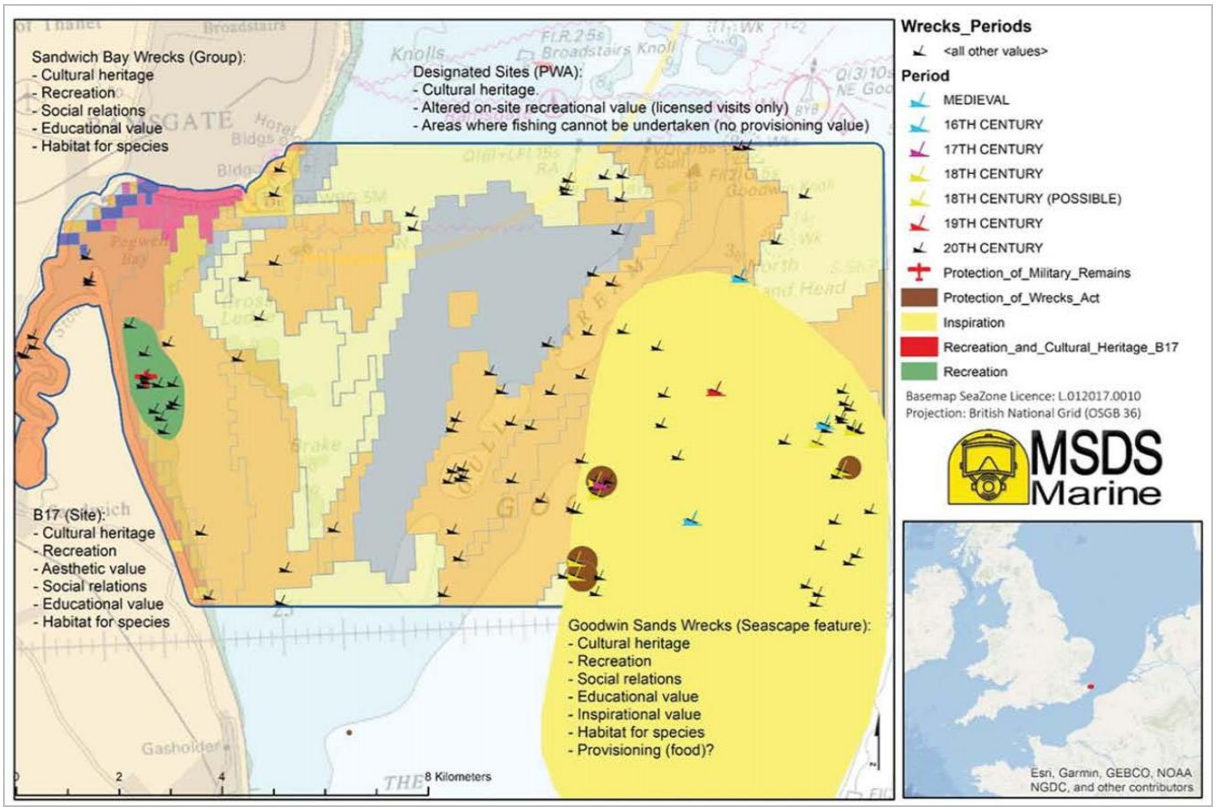
Figure 8.10 Distribution of Goodwin Sands Wrecks with Wartime Associations



Evans & Davison 2019, p53

Figure 8.11 Distribution of Goodwin Sands Designated Wrecks

These representations apply a different methodology to the definition of ‘wreck site’, which attest to research interviewee assertions that, as independent advisor to Government on the historic environment, Historic England’s area of concerns remains physical (DR:SA2). Interestingly, this physical prioritisation of heritage appears to be lessening within Historic England research as the chart in Figure 8.12 illustrates.



Evans & Davison 2019, p72

Figure 8.12 Ecosystem Services and Values Associated with Wreck Sites in the Goodwin Sands

This chart makes explicit reference to ecosystem services which for the Goodwin Sands include ‘social relations’ and ‘inspirational value’ among others. This invites discussion of the second objector representation category revisited in this section namely the Goodwin Sands as a cultural landmark.

Goodwin Sands as cultural landmark

Digging deeper into the reasons behind the campaign and objections the marine licence application protest group seemed determined on using any possible avenue to

stop the dredge, with campaign group *pro forma* objection list restated several times. The strength of feeling towards the Goodwin Sands from those interviewed as part of the case study research was extremely strong, however elucidation of the reasons for this were found to be challenging. When asked what it was about the Goodwin Sands that first motivated protest group to action the interviewee stated simply: “I think it was emotive. It was ‘you can’t’ and it was very difficult to put it into words” (DR:PG1). Pre-interview correspondence also echoed this emotive language with the representation stated that: “the Goodwins are to Deal what the White Cliffs are to Dover” (DR:PG email 23 May 2018).

Conceiving of the Goodwin Sands as analogous to the White Cliffs of Dover is evidence of representations of the inspirational value attributed to them by the Historic England research outlined above (Evans & Davison 2019, p72). Representations of the Goodwin Sands which focus on their inspirational value, and cultural importance, are also found in the Dover District Heritage Report which provides the following description:

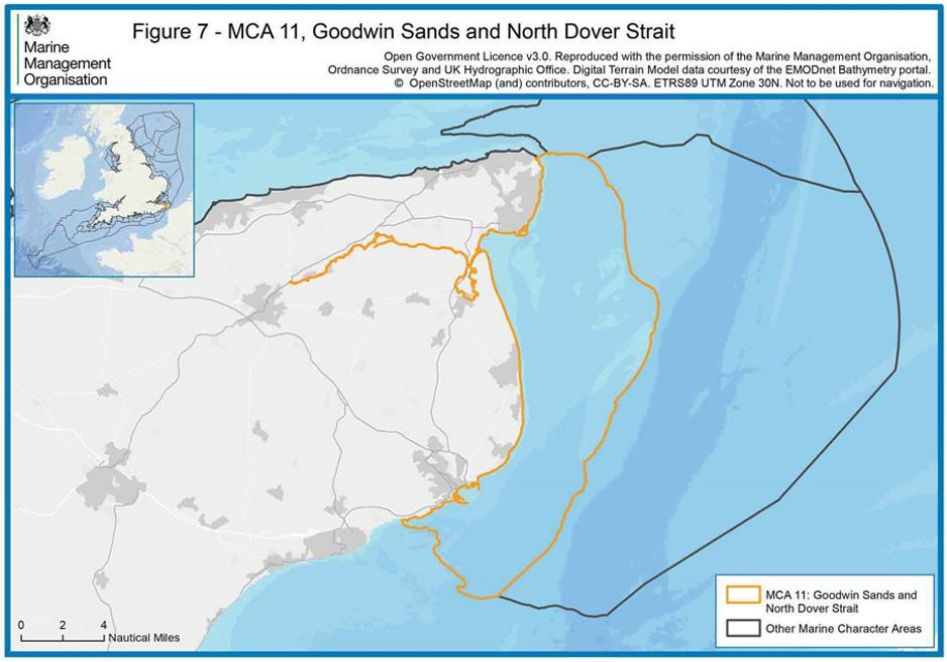
> “The sand banks which are around four miles offshore and nine miles in length have long been a major navigational hazard to shipping in this narrow historically important sea route and the scene of many a shipwreck. As well as presenting a hazard, the Goodwin Sands also provided a relatively sheltered and strategically important anchorage known as The Downs for shipping in times of bad weather or as they waited for the favourable conditions to round the North or South Foreland.” (Kent County Council 2013, p6)

The Report also contains contextual mapping of the Goodwin Sands which is presented in Figure 8.13.

Kent County Council 2013, p4

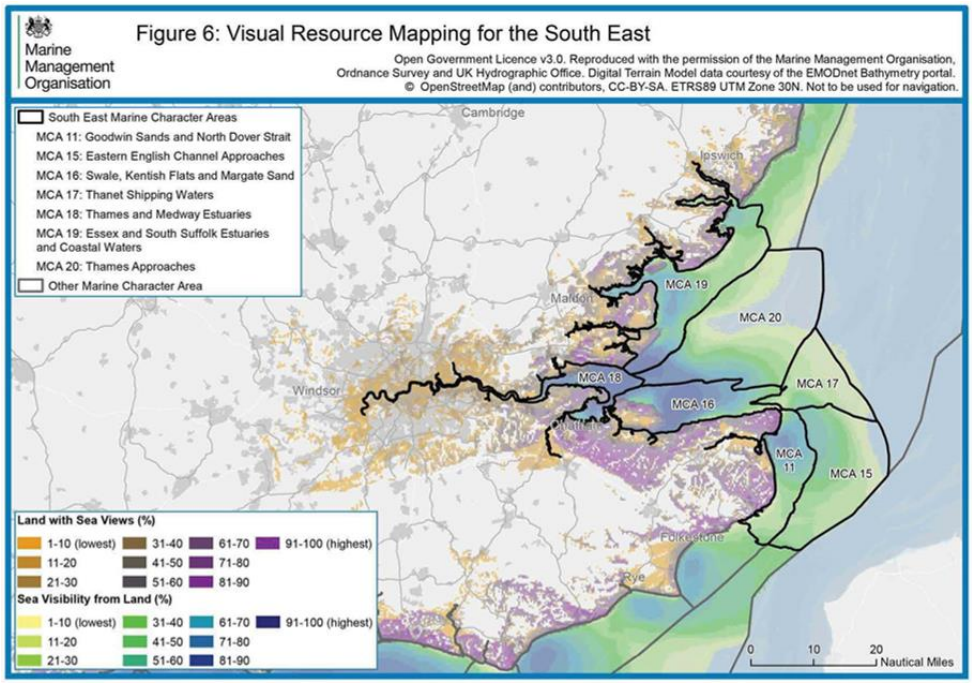
Figure 8.13 "Heritage Study Representation: The main Coastal Features of Dover District"

Whilst these Local Authority representations present the Goodwin Sands as one of the 'main coastal features' of East Kent, the MMO commissioned 'Seascape Character Assessment for the South East Inshore marine plan area' appears to downplay their importance through the representations of the Goodwin Sands within the published report (MMO 2018g). With a marine character area defined as "an area of marine space [which] has (sic) its own individual character and identity" (Ibid, p5), the assessment report presents the Goodwin Sands and North Dover Strait marine character area as devoid of features other than bathymetric data. This is presented in Figure 8.14 with additional visual resource mapping for the South East Inshore marine plan area presented in Figure 8.15 for context.



MMO 2018g, p17

Figure 8.14 MMO Representation of Goodwin Sands Marine Character Area: An Empty Chart



MMO 2018g, p16

Figure 8.15 MMO Representation of Goodwin Sands Marine Character Area: East Inshore Plan Area Context

These representations from the Marine Character Assessment appear contrary to the importance ascribed the Goodwin Sands through both the public representations within the case study marine licence application and within the District Heritage Study. This demonstrates how different conceptualisations of marine space are present within social space. To gain a more 'concrete' understanding of the productive forces present within this social space this chapter presents findings of both historical and contemporary representations of the Goodwin Sands which find reproduction within the representations presented in this section.

8.3. Historical Representations

This section presents findings from archival research undertaken within East Kent to identify the representations of Goodwin Sands which have found contemporary expression within the case study marine licence objections. Understanding the existence of these representations allows for a deeper understanding of how this conceived space has operated within the social production of the Goodwin Sands. These expressions also illustrate the absence of their consideration within the case study application which contributes to public concern regarding the impact of the project on the space. They also demonstrate how the limited representations displayed within the case study application ideologically mediate the space in their disregarding of complex and colourful heritage of the Goodwin Sands.

8.3.1. Representations from the Archives

The archive and research library at Deal Maritime and Local History Museum is physically located five miles from the Goodwin Sands, and contains a selection of local history books which provide historical representations of the area. The protest group objections had been partly based on these sources (DR:PG1) and so including them within this research was crucial in order to gain insight into how these historical representations have permeated through into contemporary public objections. The sources reviewed are presented in Figure 8.16.

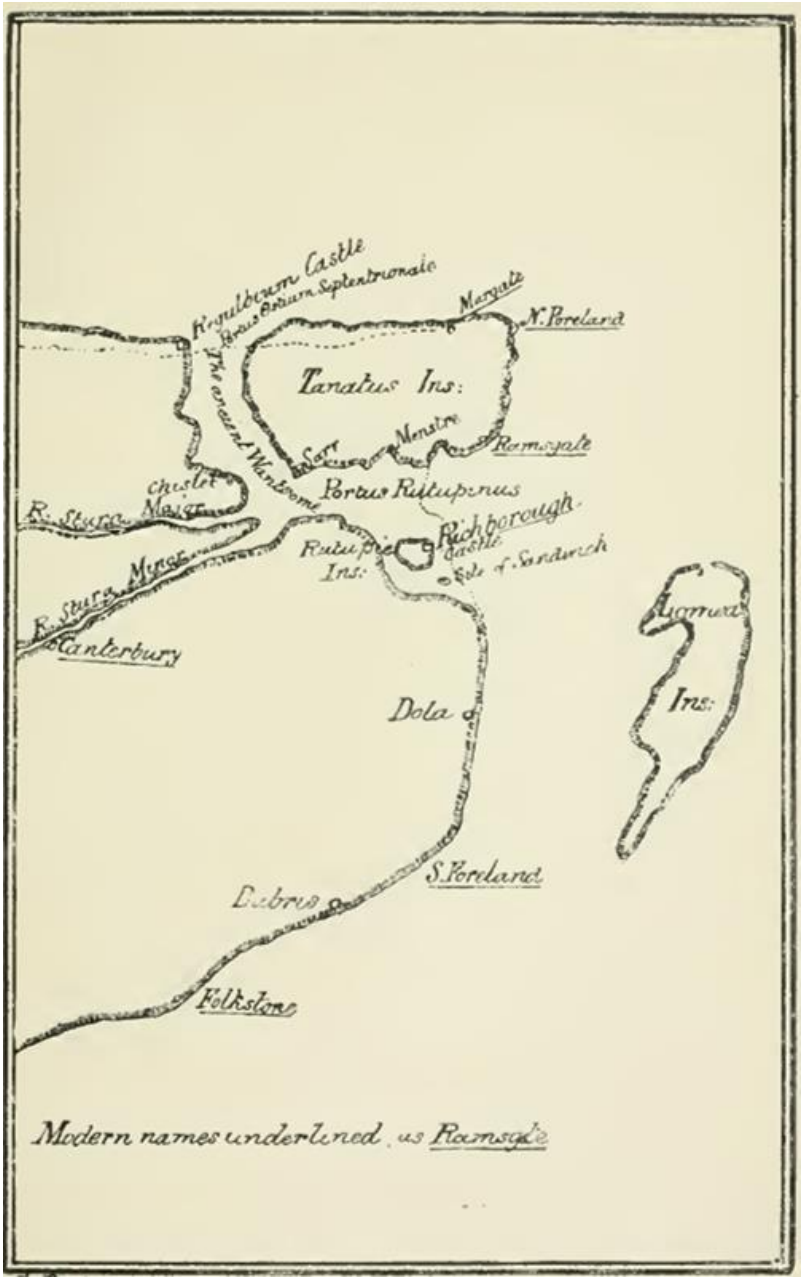
Date	Author	Title
1904	G Gattie	Memorials of the Goodwin Sands and their surroundings, legendary and historical
1921	J Laker	History of Deal 2nd Edition
1953	G Carter	The Goodwin Sands
1995	T Arnold	The Coldest Place in England: A history of Deal, the sea and the Goodwin Sands
2008	G Holyoak	Deal: All in the Downs
2016	Deal Museum	Stories and Myths from the Goodwin Sands (The Shyppe Swallower)

Figure 8.16 Goodwin Sands and Deal Local Histories

The earliest source text within the Deal Archive provides the most comprehensive account of the Goodwin Sands within the collection. It is also the most critical of the limited source data on which many of the narratives and tales are based. At the outset the 'Memorials of the Goodwin Sands' is stated as providing an accurate representation of their origin and history:

> "In the following pages the fanciful legends and stories of the origin of the Sands and their connection with the 'Isle of Lomea' (the 'Insula Infera' of the Romans), together with *the best known historical facts*, bearing upon the whole question, have been carefully brought together" (Gattie 1904, preface, emphasis added)

This reliance on 'best known historical facts' leads to the Memorials' conclusion that the Island of Lomea existed as a precursor to Goodwin Sands (Gattie 1904, p8). 'Evidence' of this is presented based on uncited 'early writers' who "distinctly mention three islands close to, or nearly opposite, the Roman Portus Rutupinus: one on the north, called 'Tanatus' (Thanet) or 'Teneth', from the fire beacon on its height; one on the south called 'Ratupiae' or 'Ruochini Insula' (Richborough); and one bearing south-east called 'Infera Insula' (Lomea, or Low Island)" (Ibid, p16, see also Holyoak 2008, p76). The 'Memorials of the Goodwin Sands includes a representation of an estimation of the East Kent Coast during the Roman Empire through a hand-drawn sketch reproduced in Figure 8.17.



Gattie 1904, p19

Figure 8.17 Sketch of Roman Kent Coast and Infera Insula (Lomea, or Low Island)

Later historians reproduced these representations of the Goodwin Sands being the remnants of an island. One makes reference to “Lyell, the famous geologist [who] found that the Sands rest on blue clay, and are surrounded by deep water, and hence concluded that they are the remains of an island” (Laker 1921, p388). Other early accounts reproduced include that some early historians “allege that the Sands emerged about 1100 AD when the Low Countries were inundated” (Ibid).

The most recently published local history text within the collection states that the "earliest mention of Lomea in print appears in 'De Rebus Albionicis Britannicus', written by John Twyne (1501-81)" (Holyoak 2008, p76). John Twyne is cited as being "the sole authority of that century for the transformation of a fertile island into the treacherous sandbank" (Ibid). However Twyne's reputation is a matter of contention with other historians cautioning against acceptance of his account stating that "All rests upon John Twyne's recollection of his own reading of early chroniclers, or perhaps even upon his imagination" (Carter 1953, pxv).

The textual representations within Deal Archives' collection are fascinating in their treatment of both historical 'fact' and 'fiction'. An example of this is in the representation of the Goodwin Sands as simply "the natural consequence of the peculiar formation of the place, and of the cross tidal currents upon it, just as any other sands may be formed" (Holyoak 2008, p78, see also Gattie 1094, p33). This account is stated as being validated "throughout the 19th century by experienced engineers who separately determined that they are *simply a mass of clean sand deposited on a bed of chalk*" (Holyoak 2008, p78, emphasis added). This clean sand is evidenced by the Goodwin Sands sample collected during research field work and presented in Figure 8.18.

Figure 8.18 "Just Clean Sand"

Despite this assertion that the Goodwin Sands are, and always have been, 'just sand', local legends linking the Goodwin Sands to Earl Godwin (father of Harold II) in the 11th Century are entertained by this historian. Earl Godwin is "supposed to have anchored his ships in a natural harbour on the Sands although, in reality, he was more likely to have sheltered them in the Downs" (Holyoak 2008, p76). Disassociating Earl Godwin from the origin stories of the Goodwin Sands is an enduring theme throughout the archival material with the fanciful nature of these tales used to discredit them:

> "One improbable story relates to how Earl Godwin while returning home at the head of his fleet was wrecked and drowned on the sandbank – and the name 'Goodwin Sands' perpetuates his memory – but, truth to tell, he suffered a stroke while dining with his son-in-law, Edward the Confessor, at Winchester, Easter 1053. He was buried in the Old Minster – a Benedictine Monastery – but his remains were swallowed up in the building of Winchester Cathedral in 1079" (Holyoak 2008, p76, see also Gattie 1904, p22)

The *fanciful legends* regarding Earl Godwin find two main expressions. The first connects the Goodwin Sands with Godwins Estate "and of their destruction by the sea, as a just judgment upon him for his many crimes and his wicked life" (Gattie 1904, p23). The second finds causal links between the drowning of the Goodwin Sands with a church spire at Tenterden, East Kent. In the Tenterden legend Earl Godwin constructed a steeple at Tenterden church to discharge a vow made to the saints to ensure his safe passage home to Lomea. The legend continues that, "being a careless, vacillating worshipper, with little or no trust in either saints or angels, he soon forgot his vow, now that the danger was past… and wholly neglected to fulfil his promise, when the vengeance of Heaven was inflicted upon him and his sons in the total destruction of his favourite sea-girt domain" (Ibid). An alternative version of this Tenterden legend sees Godwin use money and timber allocated to the dams and seawalls of Lomea for the construction of Tenterden steeple. The inevitable consequences of this reallocation of resources was the inundation of Lomea during the first great storm which followed (Ibid). Regardless of the version both legends can be evidenced as entirely fictitious. The submersion of Lomea "history states, occurred in 1099 [and] there was no steeple at all at Tenterden Church until the middle of the sixteenth century!" (Ibid). Similar to these representations of the Goodwin Sands produced through the legend of Earl Godwin is the archival account which "declares that the Sands once formed an island belonging to St. Augustine's Monastery, but the

monks neglected to repair the wall that kept back the sea, and so the island was overwhelmed" (Laker 1921, p388). These representations are notable in their use of Christian ideology relating to sin and the necessity of honest worship for either safe navigational passage or protection against the elements.

The Goodwin Sands have "always been a favourite topic of speculation" (Laker 1921, p388) and these representations attest to this assertion. The prevalence of the Earl Godwin legends and the existence of the Lomea appear in historical accounts of local cultural identity:

> "By the early years of the eighteenth century, the local tradition of a downed island once the property of Earl Godwin had become firmly established. Had you visited a certain ale-house in Broadstairs in 1736, you could have played shove-ha'penny on an oak board which the landlord swore was made from a tree once growing on the island" (Jessup 1953, pxvi)

For one author, a retired Goodwin Sands lightship watchman, these historical representations find meaning in his contemporary experience: "for two-and-a-half years I had watched the Goodwins, often musing on their history, and coming to understand the dread they held for all seamen" (Carter 1953, p3). The poetic representation of the sandbanks found within the 1953 text as resembling a "Lilliputian Sahara, with tiny dunes and miniature cliffs and deep holes with crumbing edges and quicksand bottoms" (Carter 1953, p4) appears an accurate description of the perceived space encountered during research field work as presented in Figure 8.19.

Figure 8.19 "A Lilliputian Sahara"

Whilst many histories and contemporary accounts portray the Goodwin Sands with a certain romanticism, an alternative representation is also found which describes the sense of place felt during the incoming tide:

> "Before my eyes the whole face of the sand began to change. The gullies, "fox-holes" and swillies were linking up, and the water in them started to flow. The pleasant tinkle was gone, replaced by a more sinister sound the soft roar of the returning flood. The sands were losing their stability; they quaked and shook beneath my hurrying feet, while the low hummocks melted and ran like hot wax." (Carter 1953, p4)

Deal Maritime and Local History Museum has conducted its own research into the stories and myths associated with the Goodwin Sands using much of the above cited archival text. The resultant unreferenced publication provides a potted history of the Goodwin Sands, in which the caveats included in the Gattie (1904) and Carter (1953) texts are notably absent (Deal Museum 2016).

8.3.2. Representations of Goodwin Sands through Shipwreck Accounts

> "Even a mention of every wreck which has been recorded on the Goodwins would be an enormous undertaking, and a long and unrelieved account of shipwreck would be tedious to the reader." (Carter 1953, p50)

The inclusion of shipwreck charts as representations of the Goodwin Sands within the case study marine licence public objections presented in Section 9.2.2 find precedence within both archival material and oral representations collected during research interviews. These accounts form a representation of the Goodwin Sands as a space defined by navigational danger and the spoils recovered from shipwreck. Within detailed memoirs found in the local archives, an account of the sinking of the *Violet* in 1857 is given from the perspective of crew on The North Sand Head Lightship:

> "They thoroughly searched the sands, but because of the blinding snow squalls nothing whatever could be seen. However, they stayed on until daylight, and then made another careful and extensive search. At last they found a mast sticking out of the water. A little later other grim and ugly evidence went wallowing by on the flood-tide: a lifebuoy with three battered bodies lashed to it and the painted words 'S.S. Violet… In other words, in the three hours between the lightship firing her signals and the arrival of the tug and lifeboat, the Goodwins had swallowed an entire steamer, with her crew, passengers and cargo'" (Carter 1953, pp137)

Goodwin Sands shipwreck accounts also provide more positive representations of the sandbank as beneficial to the development of the coastal town of Deal. This is evidenced through textual representations located in archive texts and oral representations from a contemporary storyteller and historian.

The existence of Deal finds historical links to the Downs located between the town and the Goodwin Sands which "provide a reasonably safe anchorage in all weathers" (Anrold 1995, p1). The Goodwin Sands themselves "provide a barrier against vicious easterly winds" (bid). The Downs anchorage allowed for "as many as 300 ships [to] be seen at anchor in the Down sheltering from the elements [with] ships of the Royal Navy… never absent from local waters and the town had a large naval dockyard" (Ibid). The stories of local boatmen in the 17th and 18th Century operating a 'hovelling' trade in service of ships either at anchor in the Downs, or foundered on the Goodwin Sands adds further to this representation (Carter 1953, p102). The Deal, Walmer and Kingsdown hovellers had the dubious "privilege of being first to organize some attempt at snatching lives and ships from the Goodwins" (Ibid, p101). The story of the hovellers also links their altruistic acts of life saving with salvage and profiteering:

> "There was the altruistic we will save lives, but if we happen to save a nice cargo at the same time then that's really good for us. People have asked me do you

> ever have wreckers round here? We didn't need to, we got the Goodwin Sands. Why would you bother standing out on windy night trying to lure ships somewhere when there was a big sandbank which was going to lure them anyway" (NR:RT8).

This representation also finds similar expression within the archives is which "this perfectly legitimate business, a good "huvvle" might also mean a profitable trip or two carrying smuggled goods" (Carter 1953, p102, see also Deal Museum 2016).

Representations of the Goodwin Sands defining it as navigationally dangerous are also found in the historical attempts to construct structures and beacons on the sands to improve their safety. The first of these attempts was to "construct a lighthouse to warn mariners of the dangers of the Goodwin Sands … made by an Elizabethan entrepreneur, Gawen Smith, around 1580" (Holyoak 2008, p78). Evidence from 1790 "when Trinity House considered the question of erecting a lighthouse on them" is also present (Laker 1921, p1953). The 'Memorials of the Goodwin Sands' outlines numerous attempts and plans to build a variety of lighthouses and other structures on the Goodwin Sands, dating from 1829 to the early 20th century (Gattie 1904; see also Laker 1921). In 1843, a plan for a fortification to be built on Goodwin Sands was also considered (Gattie 1904, p253). An additional 41 proposals for lighthouses made between 1845 and 1958 are evidenced within the archival material with none of them being successfully constructed. These accounts of development plans conceptualise the Goodwin Sands as a 'planning space'; the epitome of Lefebvre's conceived space. This finds expression within one historical source in which it is clear that both perceived space and lived experience are limited: "One thing is quite evident, and that is, that the majority of the ingenious proposers knew just nothing at all of the *real character of the Goodwin Sands, or of their true formation*" (Gattie 1904, p254, emphasis added).

8.4. Contemporary Representations

The findings from archival research into historical representations of the Goodwin Sands show the multiple moments of conceived space which are part of the coproduction of the social space within the study area. The contemporary representations presented within this section illustrate a continuance of this coproduction through the use of additional or developed conceptualisations of the

space. The reduction or absence of these representations within the case study marine licence application is further evidence of the ideologically mediated space presented within the application supporting documents. This section commences with a representation of the Goodwin Sands which finds ideological support for the application before considering additional examples of conceived space which appear limited or absent within the marine licence decision making process for this case study.

8.4.1. Goodwin Sands as Development Space

In addition to the historic accounts of proposed development on or around the Goodwin Sands, a more contemporary representation exists in the masterplans to construct an airport on the sandbanks. A local newspaper report from December 1966 advises their readers that they have "recently heard that a member of an engineering firm has made a plan suggesting the construction of an airport on the treacherous Goodwin Sands" (EKM 1966 np). Drawing heavily on the history of previous construction plans the article concludes that "maybe this latest 'building' proposal could be possible, though fantastically expensive, but I doubt whether the inhabitants of Deal would altogether welcome a Goodwin Sands airport" (EKM 1966; citing Gattie 1904). The Goodwin Sands airport plan re-emerged in 2002 as a "serious proposal which would have 'minimum environmental impact' plus 'a high degree of security' was projected by European Transport Interchange Ltd" (Holyoak 2008, p82). A further incarnation of this plan was submitted to The Airports Commission in July 2013, prior to the Commission's demise which ended progression of this scheme (Beckett Rankine 2013). The 2013 plans were presented as "the sustainable answer to south-east England's airport needs" (Ibid) and included conceptual images of the proposed development project reproduced in Figure 8.20.

Beckett Rankine 2013

Figure 8.20 Representation of Proposed Goodwin Sands Airport

In addition to airport construction, representations of the Goodwin Sands as development site are also found in local newspaper reports from 1972 which outline “a plan to use thousands of tons of sand and silt from the Goodwin Sands for a reclamation scheme in Dover [which] could effect (sic) the coastline between Kingsdown and Sandwich Bay, making important and perhaps dangerous changes to the beach at Deal” (EMK 1972). The report describes planned dredge activity strikingly similar to the case study marine licence application. Objections to the 1972 scheme are made by a retired civil engineer who is quoted as stating that “any change in the shape of the Goodwin Sands would have an effect on the beach – just the same way as the building of Dover Harbour at the beginning of the century did” (EKM 1972). The article maintains, however, that this view is not universally accepted and includes a statement from the Kent River Authority who conclude that “it is extremely unlikely the taking of any part of the Goodwin Sand will effect (sic) the coastline opposite” (Ibid). The 1972 article concludes that “of course, if the proposal ever come to fruition then it will provide an interesting spectacle for holiday-makers and residents” (Ibid). The representation of Goodwin Sands development as a spectacle is likely not shared with contemporary objectors. A follow-up article in the same paper in 1975 entitled “No Objection to Dredging on Goodwins” states that “Dover District Council will offer no objections to the dredging … needed for the building of the new international hoverport at Dover” (EKM 1975).

These representations of the Goodwin Sands as a construction space illustrates a rich historical narrative in which enterprise and the Goodwin Sands have coproduced the areas identity and value.

8.4.2. Goodwin Sands Marine Space as Dangerous

The historical accounts of proposed construction on, and around, the Goodwin Sands related to navigational safety find limited expression in contemporary plans and proposals. Increases in the use and efficiency of navigational aids has decreased the number of rescues required from the Goodwin Sands. Contemporary rescues are rare as a Deal-based representative from the RNLI explains:

> "Everybody's got better navigation now. We used to rescue a lot of yachts that used to cut across [the Goodwin Sands] and then get the tides wrong but now the shipping channel's a lot more sort of helping them, and they've all got better navigation plotters and radars and everything like that so it's a lot less than it used to be… which is good… I think people are a lot more wiser now and they do a lot more research and are a bit more qualified in their boats" (IR:MS2)

Reference to the benefit of more advanced navigational aids does, however, maintain the representation of the Goodwin Sands as a dangerous space to enter. Contemporary local knowledge and historical accounts combine in expressions of safety advice for mariners heading near the sandbanks:

> "Not a nice place to be. I was always told when I was growing up 'unless you've got to go out there, don't go near it'. That's what all the old boatmen used to say, The Old Boys. 'Unless you've got to go out there, don't'" (IR:MS2)

There is clear reference to the Goodwin Sands as being historically produced as a social space through these representations in which the spatial moments of perceived space and lived experience combine within the conceptual space experienced here.

8.4.3. Goodwin Sands Marine Space as Endangered

Representations of the Goodwin Sands as dangerous are juxtaposed with representations that see the sandbank and the wider marine space – at both local and national level – as *endangered.* Representations of the Goodwin Sands as threatened are clearly seen within the public objections submitted against the case study marine licence. These representations object to the dredge on both cultural and non-human grounds. The war grave representations discussed in Section 9.2.2 are a good

example of the former. For non-human conservation receptors this representation of marine space and the Goodwin Sands finds many expressions, evidenced in Chapter 7, Figure 8.7. Considering representations of the wider marine space first provides context for the specific Goodwin Sands representations which focus on its endangerment.

Kent Wildlife Trust (KWT) manage several public engagement and volunteering opportunities directed at the conservation and protection of the marine environment which surrounds East Kent. Whilst none relate directly to the Goodwin Sands they are useful for providing context to the representations of the wider marine area in which the sand banks themselves are located and to inform public knowledge and opinion of marine matters. KWT have seen an increase in volunteer numbers, particularly beach cleans, since the broadcast of the BBC's 'Blue Planet Two' documentary series in October 2017 (BBC 2017):

> "Because of the Blue Planet Effect everyone wants to do a beach clean. Because of that the general public have got very engaged and a lot of people coming along to the beach cleans that we organise and it's something simple that people can kind of easily do and they go away feeling good about themselves for having done something for the marine environment" (DR:SA1)

This 'feel-good' marine conservation appears to be at least partly attributable to the Blue Planet Two series. KWT have seen an increase in "requests for beach cleans, but it's difficult to say because our project really has just coincided with [Blue Planet Two]. So it's difficult to know if it's as a result of more people's awareness of our project. Certainly the requests for beach cleans is of a direct result" (DR:SA1). What is clear is that the representations of marine space as endangered created by Blue Planet (Figure 8.21) have a productive capacity to change the meaning of marine social space.

BBC 2017b

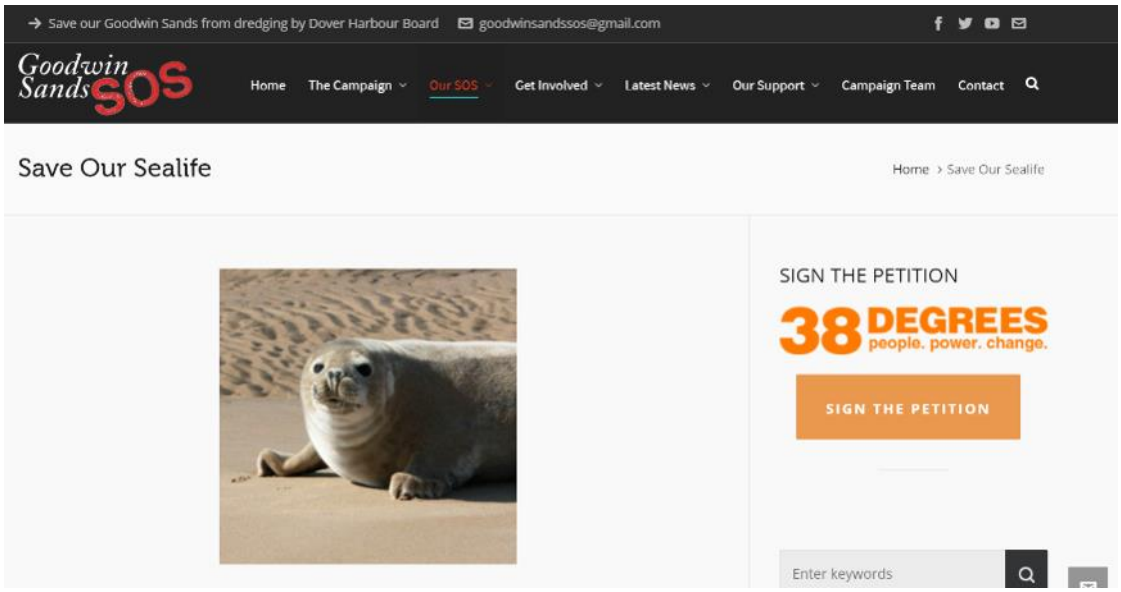
Figure 8.21 Blue Planet Two Representation of Marine Space as Endangered

The balance between marine protection and the disturbance of protected species through public accessibility education was a theme picked up from several interviewees. Comments made regarding the accessible public tours of Goodwin Sands run by a private Dover-based company offset marine education and conservation with disturbance risk:

> "[The tours] are very good and they do try and keep a good distance from the seals and many of the seals are quite accustomed to it but, you know, there is disturbance, it's inevitable… it's that balance between giving people the opportunity to see something that's in its natural setting which then makes people think 'oh this is amazing, aren't they wonderful, I really want to protect them'" (DR:SA1).

Disturbance to Goodwin Sands in relation to nature conservation receptors forms a key set of representations used by the Goodwin Sands SoS protest group in their activism literature. Indeed the name of the protest group uses the 'Save our Sands' acronym as a play on words for the Morse code distress signal 'Save our Souls'. Representations of space here are therefore used ideologically to maintain that a threat against the Sands exists and the distress call must be heard. Images of seals basking on Goodwin Sands included on the groups campaign website, shown in Figure 8.22,

appear to exploit sentimentality towards charismatic species (Potts *et al* 2014, p145), discussed in Chapter 3, to gain support.



Goodwin Sands SoS 2019c

Figure 8.22 'Save our Sealife': Goodwin Sands as Endangered

The seal in the above website image appears to be looking out to the viewer for help. The 'SoS' branding appears to impart human emotion onto the animal whilst the context of the photograph is not known.

8.4.4. Goodwin Sands Marine Space as Tourism Asset

Away from development pressures and protest groups representations of the Goodwin Sands and surrounding area are found within Local Authority literature relating to tourism and recreation. These representations introduce cultural significance to the sandbanks. Dover District Council manages tourism within the 'White Cliffs Country' area. This area includes Dover, Deal and Sandwich, depicted in Figure 8.23.

White Cliffs Country 2019

Figure 8.23 White Cliffs Country Context Map

Pre-interview engagement with the Tourism Manager for Dover District Council proved insightful. The findings of the 2018 Dover Town Visitor Survey include four *coastal places of interest* – The White Cliffs, Waterfront, Samphire Hoe, South Foreland Lighthouse – and four *directly marine related activities* – Channel swimming, deep sea fishing, water sports, sailing (Brebeanu 2018, p32; p38). No direct mention is made to the Goodwin Sands. The Tourism Manager acknowledged that the District "haven't produced anything specific to 'marine tourism'" (NR:RT1) and for a county with a predominant land/sea interface the limited data regarding marine tourism and leisure activities was "totally and utterly weird" (Ibid).

For the Local Authority Tourism department, marine space is a space to be utilised to attract visitors to the area. Discussions regarding how the council could better make

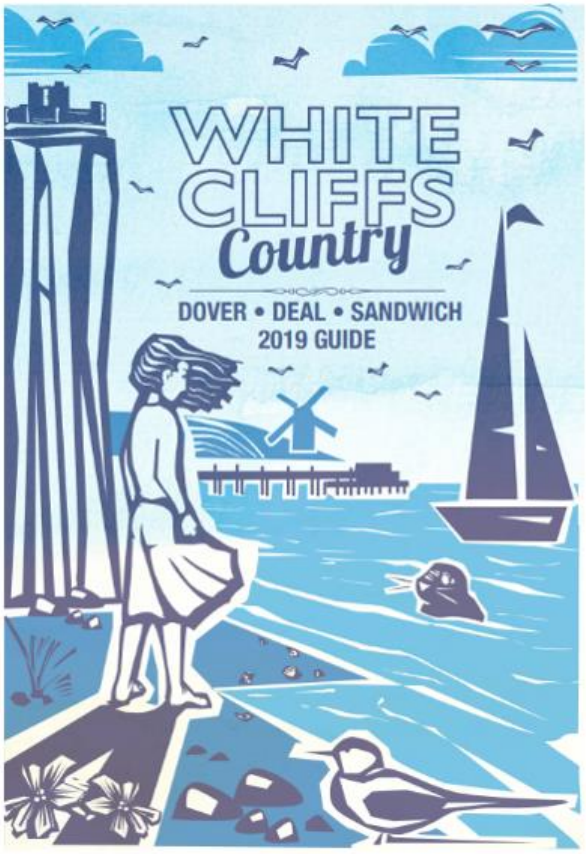
use of its physical marine and maritime asset evidenced how the area makes use of its representations of space for this purpose. Links between the Dover District Heritage Strategy (Kent County Council 2013) and tourism are recognised by the District Council as being poorly utilised:

> "Obviously there's been a lot covered in that [Heritage Strategy] and … we could shout from the rafters from the whole period going through. World War II is something we would really like to concentrate on, and again it's joining up all the dots with what we've got. We've got the product, it's how we get that and join it all up and get the funding for these things. And that's the frustration, so that's something we are looking at" (NR:RT1)

In this expression, heritage appears as a *product* to be utilised for the benefit of the local tourism economy, and space appears mediated for financial gain. This invites questions of prioritisation and whether it is the *quantity* of visitors or the *quality* of the experience which matters most. The language of this interviewee was couched in tourism and marketing terms. Locations were discussed in terms of its 'offer' to visitors (NR:RT1).

The Dover District Heritage Strategy explores the evolution of the East Kent coastline and includes specific reference to the Goodwin Sands which is described as a "coastal feature which has had a significant influence on the history of Dover District" (Kent County Council 2013, Appendix 1, Theme 5.1). The stated purpose of the Heritage Strategy is to "ensure that the heritage of the District plays a clear role in shaping any future regeneration, development and management decisions" (Ibid, p6). Discussions of heritage assets – both natural and cultural – are made in relation to "a clear understanding of the place, its significance and its value" (Ibid).

The marine environment is a prominent feature within the 2019 'White Cliffs Country Guide' (Figure 8.24). The cover of this guide portrays a representation of the "World Famous" White Cliffs which are stated as being the 'number one' Dover District attraction (Dover District Council 2018, p2).



Dover District Council 2018

Figure 8.24 White Cliffs Country 2019 Guide: Representations of Marine Space

Despite this there is an acknowledgement of the marine environment being taken for granted within local authority tourism consideration:

> "I think maybe we take it for granted that's the thing. We do take it for granted. And … it's one of our biggest attributes, and you know, it's right there… just over there in the background." (NR:RT1)

The representations of marine space within East Kent's tourism management are striking in their limitation, and mediation of space, towards activities and meanings which serve a specific purpose. Marine space is represented in virtue of its multifaceted visitor appeal, including natural and cultural heritage assets and recreational activities. The representations appear to be used ideologically within tourism documents to encourage a financial income from visitors. Marine space becomes a safe and sanitised 'product' to sell.

These tourism representations are also linked to recreational representations and festivals, which appear more purely celebratory towards the local marine environment. An example experienced during the research field work was the annual 'White Cliffs Walking Festival', which is organised and run not-for-profit by the White Cliffs Ramblers walking group, evidenced in Figure 8.26.

WCWF 2018

Figure 8.25 Marine Space as Festival Marketing

The seven day festival, at the end of August 2018, included 44 guided walks including 18 with a coastal or marine element (WCWF 2018). These coastal walks range from extensive use of the South East Coastal Path, to educational walk and talks and those which explicitly encompass "delightful views across the English Channel" (Ibid, p15). Of most direct relevance to this thesis, the 'Channel Tales' walk-and-talk was led by a 'local professional storyteller' who "entertained [participants] by tales of dastardly doings on this stretch of coast, from pre-history to today" (Ibid, p11). This guided walk from Deal town centre to the Dover Patrol Monument at St Margaret's at Cliff provided an invaluable opportunity to hear the retelling of local myths and legends and the

history of the Goodwin Sands from the perspective of local publics. The tales themselves are presented within the next sub-section.

From a tourism perspective, the White Cliffs Walking Festival provides evidence of representations of marine space in which the East Kent inshore sea is valued intrinsically for its aesthetic, wellbeing and myth status. The representation expressed here is of a space for recreation and enjoyment, without the linked profitability seen in more 'official' representations. The extent to which these representations are aimed at locals rather than tourists is a matter of some debate. Whilst representations within documents published by the tourism authority appear primarily aimed at tourists, the walking festival itself appears to straddle both groups. That said, the international origin of some walking festival participants appeared to be a matter of pride for the festival organisers (NR:RT8)

8.4.5. Goodwin Sands Marine Space as Legendary

The representations of Goodwin Sands collected during the 'Channel Tales' walk are fascinating in their detail and acknowledgement that certain 'facts' recounted were unable to be verified but that this critiques what 'counts' as real history (NR:RT8). The contemporary representations analysed in this section appeared often to rely on the historical representations discussed in Section 9.2. Where Section 9.2 presented representations within their documentary source context, for example, within the archival material, the representations presented in this section are those given expression in the primary field work data collection.

The stories and tales recounted during this walk repeat the narratives evidenced within archival texts, and within the public objections submitted within the case study marine licence application, evidencing the strength of these narratives within local identity building. The town of Deal is stated as being where it is "because there is a big piece of water out there known as the Downs" (NR:RT8). This cultural connection to the Goodwin Sands is further evidenced by the existence of the shallow draft Deal Galley boat which resembled a Viking ship and "meant you could go over the Goodwins at times when the deeper draft ships couldn't go over there so you could go out and rescue ships that were foundering in the days before any formal rescue" (NT:RT8; Deal Museum 2018).

The local legend of the Goodwin Sands being “Kent’s Atlantis”, in reference to the Roman island of Infra Insula, is also included in these Channel Tales (NR:RT8; Gattie 1904, Laker 1921, Holyoak 2008) The 11th Century ‘Low Mear’ legend is also retold:

> “The people out there who’d been grazing their sheep and living in the village and having their little church saw the [Great Storm of 1097] come in and they tried to save the land and they rang the bell as a warning, and they were inundated and they all drowned. And it was said that you could hear the bells. Fishermen would be out there on rough nights and they would hear the ghostly bells warning them about the flooding of Low Mear” (Ibid).

These stories provide evidence of the Goodwin Sands representations which have strong cultural significance for the area and the publics located there. As a natural maritime hazard the Goodwin Sands required the development of local expert knowledge for navigational safety. A darker tale recounted by a participant of the Channel Tales walk tells of a Royal Navy sailor sentenced to death by drowning for an unknown crime. The sailor requested the sentence to be carried out at the Goodwin Sands location due to his local connection with the area. Hands tide, and noose around his neck, the sailor jumped, not to his death, but rather to a comfortable standing position on the submerged sands (NR:RT9).

What is evident here is how these representations of space focus on a presentation of the Goodwin Sands as an important historical asset in both *geographic* and *cultural* terms. While these stories could be interpreted as being – using Gattie’s (1904) expression – ‘fanciful’ in the same way as the Earl Godwin legends presented in Section 9.3.1, the marine spatial context of these tales is mediated to privilege the historical and mythological representations. Contemporary use is, therefore, influenced by these historical representations.

8.4.6. Goodwin Sands a Playground

A final category of spatial representation seen within the case study findings relates to more direct recreational uses of the Goodwin Sands. These have been introduced within the case study marine licence public objections, where reference is made to cricket matches being played on the sandbanks. Finding evidence of the extent of this activity involved archival research and opportunity sampling of public event participants during the case study field work. The use of the Goodwin Sands for recreation has a long and quintessentially British eccentricity, as Gattie (1904) contemplates:

> “Most people will be inclined to think that about the very last place to be selected for the enjoyment of a game at cricket would be the Goodwin Sands. Yet it is a fact that several matches have been played there at different periods, each by a party of genuine enthusiasts, who seemed determined to try their favourite game—evidently for the singularity and the ‘fun of the thing’—on the most extraordinary, and apparently impossible spot they could select.” (Gattie 1904, pp38).

The first recorded cricket match on Goodwin Sands occurred in 1824 “under the direction of Captain Kennet B. Martin, then Harbour Master at Ramsgate, a gentleman who knew the Goodwin’s perhaps better than most people.” (Gattie 1904, p39). A second recorded match in 1839/40 nearly ended in disaster due to the “inevitable ‘hamper’, with the eatables and drinkables, which were quite as much relished as the play had been” (Ibid) leading to a delay in getting back on boats. Two matches played in 1844 and 1854 are also described in the archive literature along with tales of “games of cricket and bowls [being] played by daring excursionists” (Laker 1921, p388; Gattie 1904, p41). Images of re-enactments of these matches are also found in the archives include one in July 1973 “between the crews of two Royal Navy Survey Vessels” (Deal Museum Archive Display board) reproduced in Figure 8.26.

Deal Archives

Figure 8.26 Goodwin Sands Cricket Match July 1973

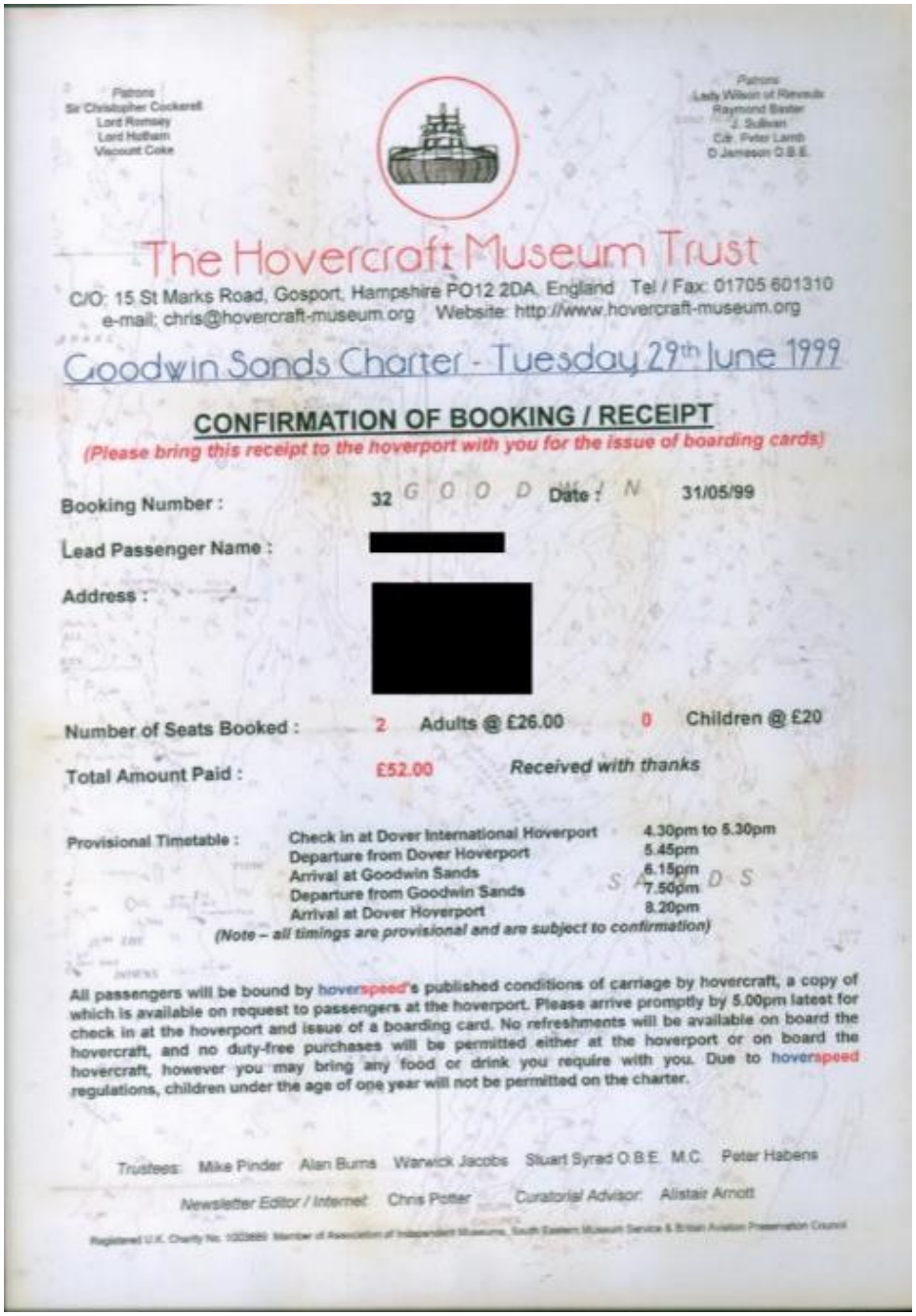
Annual cricket matches on the sandbank were made possible during the 1990s through ‘Goodwin Sands Potholing Club’ as one participant explained:

> “They used to organise trips out to the Goodwin Sands as a means of raising funds for local youth organisations. And Hoverspeed, who operated out of the Hover port in Dover, were quite keen to get involved for the publicity really and good public relations, so they used to charter, at cost, one of their hovercraft when it wasn’t being used for the international traffic and they’d fill it up with 120 people and out you’d go to the Goodwin Sands. 25 minute trip out to the sands. Obviously it had to be at low tide when you knew you had a reasonable time there. But the hovercraft would just come straight off the water onto the sand, park up and everybody would get off and do their different things” (IR:MU4)

Further evidence of these chartered trips to the Goodwin Sands is presented in the photographic evidence reproduced in Figure 8.27 and 8.28, which validate the oral history presented above.

Rydehover 2019

Figure 8.27 Hovercraft on the Goodwin Sands (1999)



Patrons
Sir Christopher Cockerell
Lord Romsey
Lord Hotham
Viscount Coke

Patrons
Lady Wilson of Rievaulx
Raymond Baxter
J. Sullivan
Cdr. Peter Lamb
D Jamieson O.B.E.

The Hovercraft Museum Trust

C/O: 15 St Marks Road, Gosport, Hampshire PO12 2DA, England Tel / Fax: 01705 601310
e-mail: chris@hovercraft-museum.org Website: http://www.hovercraft-museum.org

Goodwin Sands Charter - Tuesday 29th June 1999

CONFIRMATION OF BOOKING / RECEIPT

(Please bring this receipt to the hoverport with you for the issue of boarding cards)

Booking Number : 32 G O O D W I N Date : 31/05/99

Lead Passenger Name : [redacted]

Address : [redacted]

Number of Seats Booked : 2 Adults @ £26.00 0 Children @ £20

Total Amount Paid : £52.00 *Received with thanks*

Provisional Timetable :

Check in at Dover International Hoverport	4.30pm to 5.30pm
Departure from Dover Hoverport	5.45pm
Arrival at Goodwin Sands	6.15pm
Departure from Goodwin Sands	7.50pm
Arrival at Dover Hoverport	8.20pm

S A N D S

(Note – all timings are provisional and are subject to confirmation)

All passengers will be bound by hoverspeed's published conditions of carriage by hovercraft, a copy of which is available on request to passengers at the hoverport. Please arrive promptly by 5.00pm latest for check in at the hoverport and issue of a boarding card. No refreshments will be available on board the hovercraft, and no duty-free purchases will be permitted either at the hoverport or on board the hovercraft, however you may bring any food or drink you require with you. Due to hoverspeed regulations, children under the age of one year will not be permitted on the charter.

Trustees: Mike Pinder Alan Burns Warwick Jacobs Stuart Syrad O.B.E. M.C. Peter Habens

Newsletter Editor / Internet: Chris Potter Curatorial Advisor: Alistair Arnott

Registered U.K. Charity No. 1023669 Member of Association of Independent Museums, South Eastern Museum Service & British Aviation Preservation Council

Rydehover 2019 (reacted)

Figure 8.28 Ticket to the Goodwin Sands

A recurrent concern within the case study marine licence application public objections was the potential disturbance of wreck and war grave sites within the dredge area, with the shifting sands said to be continually covering and uncovering remains. Discussing this with the Goodwin Sands cricket interviewee led to a different representation of the presence of sensitive marine historic material in the area: “we would always have a

walk about and see if anything was sticking up but no I remember not seeing anything and being a bit disappointed really" (IR:MU4).

Public tours to Goodwin Sands still operate albeit on a smaller scale. These are discussed in Section 9.5. The use of Goodwin Sands as a recreational space has suffered decline since the demise of the Hovercraft although evidence can be found of individual trips being made by local kayakers (Hastings Canoe Club 2019), swimmers (Kent Online 2019), and sailors (DR:PG1). These small group activities are locally organised and trip reports published online are remarkably similar in their representations of the Goodwin Sands. Organised to raise awareness of the sandbank and supported by Goodwin Sands SoS, the 2019 'Big Swim' organiser expresses a deep connection with the place, stating that "The Goodwins are part of who you are, my fellow humans: Kentish, proud of it and perhaps for the first time, expressing your feelings about the important issue of preserving our environment" (Kent Online 2019). Absent of these public awareness intentions, the 2019 kayak account focuses on the physical experience of encountering the sandbank: "It was a strange feeling, standing on a beach and looking in one direction at a distant shoreline while in every other direction was open sea (Hastings Canoe Club 2019).

A final recreational activity which provides representations of the Goodwin Sands is an organised 5km run which an adventure run and ultra-marathon organiser publicised as a once-in-a-lifetime "bucket list" event in 2018 (NR:RT3). Interviewing the organiser provided additional perspectives and representations of the sandbank unconnected to local experience or cultural identity, with the Goodwin Sands chosen as a run location due to the uniqueness of the "highly PRable" location (Ibid). The national run organiser was aware of the perceived dangers of the Goodwin Sands but was keen to dismiss these as of no undue threat stating that they are "not there to present undue risk. That's not the business we're in… if it were we wouldn't be in business" (NR:RT3). The idea behind the event was partly due to the founder's involvement with the Dutch sport of Woldlopen, or "walking in intertidal mud flats with the tide out and… really engaging with the wildlife and matter of that intertidal environment" (NR:RT3).

The run event was organised for August 2018 – a period coinciding with the field work for this thesis – but was cancelled due to unfavourable weather. Evidence of test runs and the successful completion of the first organised run are found online through the

organisations blog and local newspaper articles. The themes displayed in swimmer and kayaker comments are reproduced within runners' accounts:

> "In no time at all we were back where we started with huge smiles on our faces. This was a very rare opportunity and something I will never forget. Although you want to stop and take pictures and shoot video and simply stop and 'take it all in' there is the constant nagging reminder to get back to the drop off point before the tide reclaims the whole island" (Evans 2018).

The inclusion of a Garmin GPS track of the run route caused amusement for one participant in that it appeared to show "a run done out to sea. It kept suggesting I had just done a fast swim not a run" (Evans 2018). Whilst the Garmin representation of the Goodwin Sands is explained by the proposed purpose of the tracker as a walking and running app, the appearance of the sandbank as a blank blue space illustrates both the offshore location of the area and the effect this has on representations originating from terrestrial focused perspectives. This is presented along with Goodwin Sands run images in Figure 8.29.

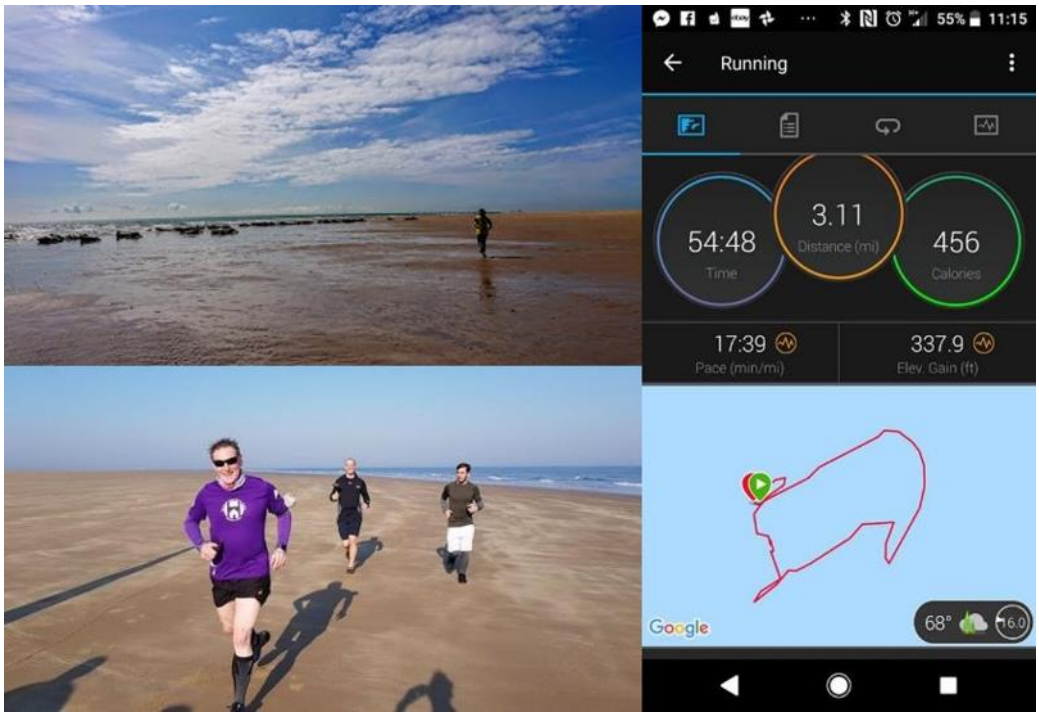


Image credits (clockwise from top): Evans 2018; Ibid; Isle of Thanet News 2019

Figure 8.29 Running in the Sea

These recreational user comments complement those found within archival accounts of encounters with ‘the Sands’. The surreal and unique experience of visiting and interacting with the Goodwin Sands appears poetic and profound. It is clear from the contemporary representations included within this wider section that experiencing the Goodwin Sands is crucially important for gaining knowledge of them. To this end, the research field work for this thesis included by necessity a trip to the sandbank utilising the publicly organised tours to gain perspective on both the physicality of the area and the public experience of entering this space. The findings of this experience are presented below.

8.5. Perceiving and Living Goodwin Sands through Field Work

The challenge of describing perceived space without recourse to its representations was discussed in relation to the application of the conceptual framework in Chapter 4, Section 4.6. This is evident in the account of ‘the existing environment’ given in the case study marine licence application EIA, and in the findings presented throughout this chapter. Giving an account of the spatial practice of the Goodwin Sands is likewise meaningless if it is the nature of the space as a social space which is desired, because spatial practice “embraces production and reproduction, and the particular locations and spatial sets of characteristic of each social formulation” (Lefebvre 1991, p33). As explained in Chapter 4, the conceptual framework still utilises the Spatial Moments to explore aspects of marine space.

As such, It was important for this research for the researcher to experience the space for themselves, and whilst the account of this experience necessarily becomes one representation amongst other representations, it does present findings which support the use of Lefebvre’s spatial triad within marine development impact assessment and decision making. This section makes clear that an account of the physical marine space which comprises the Goodwin Sands absent from the *representations of space* and “the ‘order’ which those relations impose”, and the *representational spaces* of its lived experience, attaches little meaning to the space itself (Lefebvre 1991, p33). This is because “the *places* of social space are very different from those of natural space in that they are not simply juxtaposed: they may be intercalated, combined, superimposed – they may even sometimes collide” (Lefebvre 1991, p88). In the

account below, findings which support this statement, through the inclusion of a description of the field work Goodwin Sands visit, are presented along with the presentation of photographs made on the sandbank from which meaning can only be taken with the addition of prior introduction to the framed image.

8.5.1. Experiencing Goodwin Sands

Tide and weather dependant public tours to the Goodwin Sands operate out of Dover Harbour. On the field visit day the favourable weather conditions allowed for the “first trip out in three weeks due to weather” (DR:RT1). The short draft catamaran which takes visitors out to the sandbank is replaced by unpowered dinghy for the final approach, shown in Figure 8.30.

Figure 8.30 Transfers to the Goodwin Sands

This experience of arrival on the sandbank adds to the surrealism of the encounter. With minimal safety advice provided the main catamaran skipper allows visitors an hour on the sands to avoid being caught by rising tides.

Field photographs made on Goodwin Sands are included in Figures 8.31 to 8.33 in an attempt to capture the experience.

Figure 8.31 Goodwin Sands Seals and Cargo Ships

Figure 8.32 Walking on Goodwin Sands

Figure 8.33 Goodwin Sands Panoramic

The space feels both empty and imbued with meaning. The sounds, smells and feel of the waves, sea air and compacted but yielding sands make for a unique experience. Public participants of the tour confirm this researcher's experience. They are "just bizarre" (NR:MU6). They "speak for themselves really" (NR:MU7). The only sounds audible are the waves breaking on the sands and herring gulls overhead. This tranquillity was only broken by a Spitfire flying overhead; a coincidental reminder of the objection to disturbance of war graves and wreck.

Standing in the English Channel, in between the North Sea shipping lane to the East and White Cliffs of Dover to the West, offers a chance to reflect on the physical location of the Sands, their archival and contemporary representations, and the researcher's own positionality. Herein lies the problem. This Goodwin Sands trip was organised as part of the field work undertaken for this thesis. The history and controversy of the marine licence application were well known to the researcher at the time it was undertaken. So too were the archival accounts and poetic representations of the spirituality and meaning of the sands. Photographs made were reviewed upon return to land. They show both the *Goodwin Sands* and also *just a sandbank.* Meaning can only be attached to them in virtue of the label attached. The seals visible in Figure 8.31 are identifiable only to trained eyes. Even the panorama presented in Figure 8.33 cannot accurately portray what making this image felt like.

The field trip visit allowed the researcher to experience the Goodwin Sands as *representational space,* however this lived experience was coloured by the representations already encountered. The Goodwin Sands as spatial practice only became evident upon reflection of the data collected from the visit. Presenting the images and the sand collected (Figure 7.20) to other people required an account of where they were from and their significance. In this way, the lived experience of their collection gives meaning to the perceived space of their origin.

Returning to the site visit as a data collection method, no evidence of the ubiquitous wrecks was seen. The tour skipper had warned of this absence by pre-empting any disappointment by stating that “there was a mast sticking up but I think the sands have shifted, they always shift” (DR:RT1).

Tour operator positionality is important in this, and other, informational statements made during the trip. As the only business operating public tours to the Goodwin Sands, the Port of Dover based operation provides unique access to the sands. The locational base of the tour operator invites bias considerations within the information provided during trips. The Goodwin Sands dredge application appeared to have been beneficial for business with one participant on the field work tour being motivated to attend to “see what all the fuss was about” (NR:MU5).

Visiting the Goodwin Sands provides context to the marine licence application protest. On the return from the sandbank a pause over the actual dredge site allowed for the operator to explain that “this is where they’ll dredge, it’s deep water and never covered – it won’t disturb the seals” (DR:RT1). Reference to the potential disturbance of seal appeared unprompted, perhaps evidencing requests made on previous trips or detailed knowledge of the dredge protest.

The data collected through the experience of visiting the Goodwin Sands is both of crucial importance to understanding the space, and also deeply imbued with knowledge and opinion gained through desk-based research of them. Objectively, the sandbank is just that; and area of intertidal sand located four miles east of Deal accessible for only a short time at the highest spring tides. Subjectively, it is more than this. Only through undertaking this research would this researcher have known about them or visited them. Experiencing them provided an understanding of the Goodwin Sands which is hard to replicate in text or imagery. This is discussed within Chapter 9 regarding the importance of experiencing development sites prior to determining licences which impact them.

8.6. Chapter Conclusion

It is clear from the findings presented in this chapter that the 'concrete' nature of the Goodwin Sands is *more* than that presented within the case study marine licence application and supporting assessment documents. A richness and complexity is applicable to the Goodwin Sands as a social space which selective representations alone cannot express. The linkages and multiple meanings, values and beliefs found within historical and contemporary representations coproduce this space, with its physical and lived moments. The 'unpeopled' account given within EIA descriptions appear contradictory to the rich and diverse cultural usage of the area both physically and mentally. In this way, the application EIA is evidenced as a very specific and calculated ideological mediation of space necessarily conceived to support development consent.

Considering the space presented within the EIA alone does not, therefore, provide an accurate portrayal of the Goodwin Sands development site. This is important and discussed within Chapter 9 in relation to marine licensing decision making more generally. As the representations presented within this chapter make clear, the meaning of the Goodwin Sands depends on public experience of them and the absence of this from application impact assessment denies the public nature of this social space. Where the Goodwin Sands marine licence application documents privilege physical environmental receptors, the myths and stories associated with its historical and contemporary socio-cultural representation gives meaning which is richer than a purely physical geographical account. It is through this process of the sedimentation - the laying down, or layering - of values, meanings and imaginaries onto the sands where the dissolution of natural space into social space is evident.

The pragmatics of replication of this scale of data collection within marine licence decision making invites discussion and this is included in Chapter 9 along with application of public space models to the Goodwin Sands based on the research findings and a wider discussion of the implications of the research findings presented within this thesis.

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Chapter 9. Discussion

9.1. Introduction

The structure of this chapter reverses the presentation of the research sub-questions utilised throughout the earlier Chapters. This approach allows the discussion sub-sections to build on each other in order to conclude with a response to the overarching research question. This structure is illustrated in Figure 9.1.

	RQ1. What is 'the publicness of the sea'?	**RQ2.1** How public are the marine governance institutions and legal and political frameworks within which English marine licensing operates?	**RQ2.2a.** What is the marine development decision-making process? **RQ2.2b.** How public is the marine development decision-making process
Public and Developer relationship	✓		✓
Public/Private (marine) space	✓		✓
Public/Professional (Expert/"non-expert") knowledge	✓		✓
Public interest in development	✓		✓
Democracy in marine licencing	✓		✓
Evidence of privileging of stakeholder interests	✓		✓
Legitimation of particular interests	✓		✓
Marine Licensing process		✓	✓
Public access to process		✓	✓
Validation of public concerns		✓	✓
Regulator engagement with public		✓	✓
Regulator publicness and accountability		✓	✓
Use of knowledge claims within marine licensing decision making		✓	✓
Use of evidence; legitimation of evidence		✓	✓
Stakeholder engagement		✓	✓
Public access to decision makers and process		✓	✓

Figure 9.1 Discussion Themes within -Research Questions

Utilising the same ordering as the findings and analysis Chapters, this chapter commences with discussion of RQ2 *How public are the marine development governance frameworks and decision-making processes?*. Discussion of this research question is presented within the three sub-research questions outlined in Chapter 4.

Section 9.2 discusses overarching process considerations and responds to the research question (RQ2.1) '*how public are the marine governance institutions and legal and political frameworks within which English marine licensing operates?*'. The responses given in this section are more heavily focused on the implications of the legal and political frameworks, rather than on the frameworks themselves. In other words, the focus here is on the limitations observed within the current framework. Section 9.3 turns to marine development and its impacts. This section addresses the sub-research questions (RQ2.2a) '*what is the marine development decision-making process?*' and, more crucially, (RQ2.2b) '*how public is the marine development decision-making process?*' with a focus on the application impact assessment provided by developers. Section 10.3 also considers the second and third research questions in relation to the marine licensing process itself. The issue resolution and the consultation processes are also included here. Finally, with regards to question (RQ1) '*what is the 'publicness of the sea'*?' Section 9.4 discusses the findings of the Goodwin Sands case study, and applies public space models to this site. This is then extended to consider the implications of these findings for wider conceptualisations of marine space as public.

The discussion themes are then brought together in Section 9.5 to provide a response to the overarching research question '*What is the relationship between the publicness of the sea and the process through which marine development is assessed and consented within the English marine licensing?*' Here, the utility of using the production of space thesis is discussed and wider research conclusions are drawn.

9.2. Marine Governance Systems and Publicness

This section considers the evidence of public access within the marine licence decision-making process – separate from the assessment of development impacts – based on the main case study findings and supplemented by case example findings.

This section therefore discusses the *process itself* rather than the assessment and determination of specific licences. As such this is considered in response to the sub-research question (RQ2.1), *'how public are the marine governance institutions and legal and political frameworks within which English marine licensing operates?'.* This discussion focuses on the governance framework of marine licensing rather than the policies and legislation which enacted this framework. As such, the marine licensing process is used here as evidence of the *implementation* of policy and legislation due to the embedded nature of the marine licencing system within wider UK marine governance structures. This discussion is first contextualised through a discussion of legal challenges lodged against the MMO before exploring the case study and case example findings within this context.

As presented in Chapter 6, judicial review is the only publicly accessible appeals process available for granted marine licences. The policy justification for this was the resolution that the MMO would have the ability to resolve all issues raised in objection to marine licence applications during the application process (Defra 2011a, p23). Consideration of the MMO's experience of judicial review challenges is useful in relation to *the steps prior to licence determination which need to have been unsuccessful* in order for the appeal to have been deemed necessary. Since its vesting in 2010 the MMO has been subject to very few judicial review appeals. Data on these cases was challenging to access within the public domain due to their legal nature however the MMO's Communication Team confirmed that:

> "To the best of our knowledge there have been two finalised judicial reviews of licensing decisions (one of which was not aimed directly at the licensing decision, but related to the associated issue of Board of Trade consent) and one ongoing matter. There have been a handful (around four) of cases which have been threatened but never got as far as formal proceedings being commenced" (MMO Email 18 June 2019).

The 'ongoing matter' is assumed to be the Goodwin Sands case due to the date of this information. With less than 0.1% of the MMO's' c3000 determined marine licences being subject to judicial review challenge it could be logically concluded that the MMO does indeed successfully resolve any issues which are raised during the application process. However this conclusion cannot be reached without further consideration of the issue resolution process itself particularly in relation to public consultation. Assessing whether the public objections submitted within the main case study were

adequately addressed from the perspective of the objecting publics allows consideration of this. The case example data findings are also useful here in relation to their absence of public consultation detail. Three alternative hypothesis can be made for the lack of marine licence appeals, introduced within presentation of the MMO interview data in Chapter 6, and based on the case examples and case study data. These are presented in Figure 9.2 and discussed below.

Hypothesis	Details
1. **MMO processes are successful**	The MMO's consultation and issue resolution processes are effective
2. **Public finds no need/grounds to object**	Consultation processes are effective but the public finds no reason to object to marine development
3. **Public unaware of licence applications**	Consultation processes are ineffective at reaching public consultees and the lack of public awareness of marine licence applications leads to no objections being submitted in the majority of cases

Figure 9.2 Three Alternative Hypotheses for the Lack of Marine Licence Appeals

9.2.1. Process Considerations within MMO Marine Governance Systems

Consideration of hypothesis 1 – MMO processes are successful – requires a re-examination of the following features of the licence determination process which were seen as potential weaknesses within the findings chapters: lack of licence refusal, use of marine licence determination hold time, the lack of transparency regarding assessment and determination processes, and the technocratic nature of marine licensing determination.

Lack of licence refusal

As evidenced in within the quantitative marine licensing data analysis findings in Chapter 6 less than 1% of all applications determined by the MMO have been withdrawn or refused. This appears to lead to acknowledgements by the MMO that the process through which applications are determined is an *approval* rather that *determination process.* This is evidenced within the MMO's online marine licensing guidance documents and within case officer correspondence located within case

example documentation (MMO 2018a; BH9). The findings from the main case study marine licence also support this, as evidenced by interview data which stated that publication date for the granted marine licence became a political rather than technical matter (DR:DEV1). Of course the 'presumption in favour of sustainable development' complicates matters here, as MMO interview data presented in Chapter 6 evidences (DR:REG1; MHCLG 2018).

The lack of refused or withdrawn marine licences invites consideration of how MMO processes differ from those of their terrestrial counterparts. The findings of this thesis form part of this exercise through their delineation of the licensing process, and this is considered below in relation to the technocratic nature of this decision-making framework. It could be argued that the low licence application refusal rate is evidence of ineffective determination process. This would apply if the consultation process was evidenced as inadequate or being undertaken 'in name only' with no intention for public comments to be fully considered within licence determination. The public representations submitted in objection to the main case study marine licence appear to point towards this conclusion, however there is not adequate evidence here to support this claim.

Hold time

The data findings from the case example analysis and from the main case study marine licence application evidence the use of 'hold time' within the application determination process. Placing an application 'on hold' whilst additional information from the applicant is sought, allows the MMO to maintain that it determines marine licence within the 13 week target set by policy (MMO 2018a; 2018d). The main case study marine licence determination timeline, presented in Chapter 7, provides evidence of the use of hold time. Further to this, it can be assumed that it applies to many other marine licence applications due to the case example data analysis evidencing that less than half of the sample applications were determined within the 13 weeks, while the MMO asserts that 90% are determined within this timeframe (MMO 2018d).

The MMO's insistence of maintaining the 13 week target for 90% of marine licences invites the question of the motivation behind this claim. The case study and case example marine licence data analysis findings cannot provide comment on this, however the MMO representative interview, presented in Chapter 6, does provide

insight. Based purely on the research findings, this discrepancy between the 13 week target and the actual determination timeframe including hold time provides a key area of discussion regarding the hypothesis that the MMO's processes are successful in limiting public objection. If this process, and specifically the use of hold time to collect additional information requests and undertaken additional consultation and issue resolution, is so effective then why does the MMO not state this up-front as their method of licence determination? This is related to transparency of process more generally and is discussed below.

Lack of transparency

Several key interviewees expressed concerns regarding the lack of transparency within the determination process for the main case study marine licence, as evidenced by the findings in Chapter 7. These relate to lack of transparency towards timeframes raised by the applicant (DR:DEV1), and lack of transparency towards the decision-making rationale itself (DR:PG1; DR:PG2). This is further evidenced within the case example marine licences analysed and presented in Chapter 6, in which several marine licence applications had minimal supporting documentation published in their public registers (1.BB; 1.BL; 1.IR; 1.LF; 2.AQ; 2.CWN; 2.GG; 2,HW; 3.GuS; 3.SF). The general opacity of the marine licensing guidance provided within the public domain, seen in the policy and process analysis within Chapter 6 is concerning. Requests for formal MMO engagement in this research and discussion of the process which resulted in the desire to limit the public release of process documents, discussed in Chapter 4, is seen as a major finding in relation to the publicness of the marine licensing process. This is discussed further in Section 9.5.

Technocratic marine licensing

The final feature of the marine licence determination process to be considered here is its technocratic nature. This bridges the 'process' and 'engagement' themes considered within this discussion of the publicness of marine governance. Where terrestrial planning applications are often decided by a committee of elected local representatives, marine licences are determined by a non-elected public servants (Defra 2004; Flinders 1999, p4; Weir 1995). This is perhaps unsurprising given the development of marine policy occurring alongside the PA2008 planning reforms which introduced a national infrastructure consenting process, in which the determination of

nationally significant infrastructure projects (NSIPs) is removed from the local democratic planning process (Newman 2009; Defra 2010a; UCL 2019). This 'speeds up' planning decisions but is heavily criticised for its ability to impose locally unwanted large development projects on communities using national benefit as the justification (Newman 2009).

This technocratic approach to development management invites critique of the MMO's decision-making public accountability. The perceived lack of democracy within the main case study application was evidenced through the use of online petitions (GS5). But caution is needed here. Evidencing public consensus through online petitions is, at best, problematic based on the literature regarding Willingness to Pay, and other interview insights regarding conservation volunteering being short-sighted towards individual engagement activities (Sagoff 1998; McCartney 2006; de Groot *et al* 2012; Norton 2017).

The main case study marine licence raises an additional discussion point regarding the technocratic nature of the MMO. The distrust shown within the findings regarding the relationship between the MMO and the applicant led to accusations of the former being in cahoots with, or part of, the latter (DR:PG1). This was stated as evidence of the perceived 'closed door' decision-making processes being undertaken by the regulatory body (Ibid). The applicant-organised Public Meeting did little to assuage this distrust nor did public information campaigns designed to provide additional information regarding the assessment conclusions that the project would not cause a significant effect to the Goodwin Sands (GS9; GS11; DR:DEV2; DR:PG1). Meetings held between the protest group and the regulator again did little to mitigate distrust in the nature of the MMO's decision-making (GS11; DR:PG1; DR:PG2). The licence decision being made was seen as biased towards the applicant (GS11). Requests for a democratic decision-making process, in which the MMO is held accountable to the public, were made throughout the licensing process (GS15; GS51).

9.2.2. Public Engagement Weaknesses

This sub-section considers the extent to which the marine licensing consultation process can been deemed effective in relation to its ability to engage with the public and its ability to consider the public concerns raised. This allows for discussion and

evidence of the alternative hypotheses 2 and 3 regarding reasons for the lack of marine licence appeals.

Evidence from the main case study marine licence invites consideration of how to improve the current public consultation process. The protest group founding members became aware of the licence application through a national media news segment rather than through any of the attempted consultation methods requested through the application process (DR:PG1). How publics are made aware of applications is a challenging question, discussed within the MMO representative interview findings presented in Chapter 6, and revisited below.

Consideration is needed to understand what acceptable and effective public engagement on marine licence applications would look like. Acceptability and effectiveness are not necessarily compatible. Links to the procedural justice literature are clear with regard to their assertion of the importance of public participation (Sohlosberg 2003; McKay *et al* 2012; Parkinson 2012a). For the protest group *successful* public consultation or engagement within the licensing process for the Goodwin Sands application includes the desire for earlier identification of themselves as stakeholders and the acknowledgement of their objections to the application (DR:PG1). It is this acknowledgement of the value of their contribution to the licence determination representations which appears to be the sticking point. For the case study marine licence public objectors, it appears that the consultation and engagement process would have been deemed successful only if the licence were to have been refused. Counter to this is evidence of applicant frustrations are the perceived rejection of their public consultation and engagement attempts (DR:DEV2). In addition, the perceived enhanced engagement that the MMO offered the protest group was seen as giving them too much power within the decision-making process (Ibid; DR:DEV1). This dualism appears to amount to a simple statement that engagement is only successful for the ‘winning’ party.

But is this a fair assumption? It is clear that the consultation process resulted in a hostile relationship between the applicant and the protest group in the case study marine licence application (GS51; Port of Dover 2017a; 2017b). However this has also been evidenced as not entirely originating from the licence application itself but rather historic grievances and socio-cultural local disputes (DR:DEV1; DR:DEV2; DR:NSA1;

DR:PG1). As such, considering marine governance and decision-making through a procedural justice lens helps to discharge the decision-making scenario. It is the *process* in which publicness and fairness is found, not within the resultant *decision* (Parkinson 2012). What is important becomes, once again, the transparency and accessibility of information *about the process* through which marine licencing decisions are made. The case study and case example marine licences can only provide evidence of the *results* of the public engagement process, and therefore whilst critiques can be formed and recommendations made the regulator motivations behind this process remain largely hidden. The motivations for enhanced public engagement evidenced from the case study marine licence applicant appeared frustrated in that whatever they did "they could do nothing right" (DR:DEV2).

The MMO Interview data provided evidence of resource challenges within the licensing team preventing enhanced engagement with stakeholder. These resource challenges offer little comfort for the publics attempting to engage with the organisation. The lack of data regarding the effectiveness of the public consultation process in relation to public notices is concerning. The increased public awareness and concern for marine environments attributable to broadcast media in relation to issues such as plastic pollution and habitat loss (BBC 2001; Speth & Hass 2006; BBC 2017; Guardian 2019; DR:SA1) appears far removed from marine licensing practices.

The key assertion to take from the regulator perception presented in Chapter 6 is the importance of ensuring that public consultation campaigns are fit for purpose. Only through ensuring this can an answer to the three alternative hypotheses for the lack of post-consent challenge, and the low number of public consultation responses, be proposed and justified. It does, however, appear that the MMO are aware of consultation shortcomings – although it is unknown whether this is an individual view shared more widely within the organisation. The evidence presented within the main case study research findings in Chapter 7 supports this need, and given the experience of the MMO interviewee, it appears unlikely that these views will be entirely without wider organisation support. A satirical comment made based on Douglas Adams' 'Hitchhikers Guide to the Galaxy' (Adams 1980) serves to summarise the current marine licensing consultation process:

> "So the plans are displayed prominently. Yes they were displayed prominently, in the basement at the planning department in a disused toilet behind a sign

> saying beware of the leopard. It's [the MMO public consultation process] kind of, not that bad, but you have to know it's there to look for it." (Annon Pers Comm)

Whilst satirical, this comment provides a clear indication of a desire to improve public consultation and the frustrations felt within the current marine licensing system. That this quote makes reference to a fictional reflection of the terrestrial planning system in the late 1970's is evidence of the marine licensing process relying, at least partly, on consenting and consultation processes for which amendment is required in order for them to remain relevant and useful today.

9.3. The Publicness of Marine Development Assessment and Licensing

In this section the publicness of place is considered through the publicness of the decision making process which operates within it. The findings of the marine licence case example analysis and quantitative marine licensing and policy analysis are also utilised here to provide responses to sub-research questions (RQ2.2a) '*what is the marine development decision-making process?*' and, (RQ2.2b) '*how public is the marine development decision-making process?*' The language used within development impact assessments and decision documents, along with the status of experts, is also discussed.

To unpack these discussion themes, the publicness of marine development and assessment is discussed below by exploring the implications of the research findings for the Ecosystem-Based Approach (EBA) and paradigmatic EIA consenting process. To introduce this discussion reflection on the oceanographic scientific methods on which EIA is founded proves useful.

As presented in Chapter 3, oceanography focuses on understanding the natural marine environment whereas heritage studies have focused on preserving the historic elements of maritime culture and socio-economic policy has focused on the value of the marine environment in capitalist terms (Duxbury *et al* 2002, p2, Pinet 2013). Oceanography has tended to consider human activity as something opposed to the 'natural' marine environment and overlooked the importance of historic use of the seas as a source of identity (Pinet 2013). These approaches require consideration in relation to the ethical and value judgements which are both the source of the disciplines' focus and reinforced through their practice (Brown *et al* 2002; Sagoff 2010). Anthropologic

use of the sea has considered the marine environment as a transport surface, a battleground or barrier, a resource provider, a dumping ground and a playground (Steinberg 2001, p20, Friel 2003, p285). At the same time, advances in oceanography have allowed for an understanding of the impacts that these have had on the marine environment to the point where regulatory marine spatial planning frameworks now manage or regulate these activities (Barry *et al* 2008, p70; Jay 2011; Hull 2013; Scarff 2015; Turner & Essex 2016). This is clearly evidenced within the Goodwin Sands case study. The multiple contemporary and historic uses of the area have conceived it as a navigational hazard, a coastal protection asset, an aggregates source, a graveyard and wreck site[57] and a cricket ground, running track or general recreation space (Gattie 1904; Laker 1921; Carter 1953; EKM 1966; 1972; 1975; Holyoak 2008; Hayward 2017; Evans 2019; GS5; GS15; GS51). At the same time, EIA processes have mapped the Sands' currents, benthic habitat and other physical properties to assess development impacts of these receptors (GS3.1; GS3.2).

How can these uses be reconciled and prioritised? It is clear from the main case study that cultural value of the Goodwin Sands cannot be overstated. Whilst this value is a component of ecosystem services it appears delegitimised within the EIA process, in which 'human environment' assessment limits its focus towards social interests in association with specific ecosystem services for example fishing (Pater & Oxley 2014, p347; GS3.1). These assessments do contribute to the protection of the socioeconomic benefits gained from the marine environment to some extent, but also serve as an example of a devaluing of the idea of the seas as dominant for cultural advances (Kirby & Hinkkanen-Lievonen 2000, p59). The case study marine licence public objections, and the historic and contemporary representations of the Goodwin Sands, are evidence of a spiritual connectedness with the marine environment formed through centuries of changing opinions about both human use and responsibility for this specific marine space and the marine environment more generally.

The Cultural Ecosystem Services discussed in Chapter 3, in relation to wider EBA narratives, appear to apply value judgements to the assessment process of these

[57] As opposed to dumping ground in the more deliberate sense.

cultural receptors based on positivist methodologies more appropriate for natural science disciplines (Rees *et al* 2010; Potts *et al* 2014; Fletcher *et al* 2014; Jobstvogt 2014; Dominguez-Tejo *et al* 2016; de Juan *et al* 2017). This is a challenge for data validity within assessment conclusions and this is evident within the case study marine licence presented in Chapter 7.

Three interrelated themes emerge from the research findings regarding the challenge made to the publicness of space by marine development. These are: (1) the conflict claims of legitimacy regarding use of the sea, (2) the justification and language used to support development assessments and consent, and (3) the conflicting knowledge claims from professions and non-professional or technical and non-technical data sources within the impact assessment process. These are discussed in turn.

9.3.1. Claims of Legitimacy in Marine Space Use

The public objections to the Goodwin Sands marine licence application, evidenced and analysed in Chapter 7, appear to challenge how decision-makers include legitimacy of marine space activity within marine licensing. To discuss this point a return to the legislation and policy underpinning marine licensing is necessary. The requirement under MCAA2009 for marine licensing decision-makers to "prevent interference with legitimate uses of the sea" was introduced and critiqued in Chapter 5 (HM Government 2009a). Expanding on this 'legitimate use' requirement necessitates inclusion of the MCAA2009 Explanatory Memorandum definition of 'legitimate use' which states that it "includes but is not limited to: navigation (including taking steps for the purpose of navigational safety); fishing; mineral extraction; and amenity use" (HM Government 2009b, s241). Combined with the assertion that the MMO as decision-maker can "further any of the three core elements of sustainable development" within its consent decisions (HM Government 2009b, s46) and in the absence of a hierarchy of marine objectives (Defra 2007; Defra 2010d; HM Government 2011a; HM Government 2011b), the lack of prioritisation within these legitimate uses does little to assist decision-makers within controversial cases.

This absence of a succinct and clear definition for the meaning of legitimate use of the sea is complicated further through the policy area remits combined within the MMO's marine licensing function (Defra 2007, p141). As presented in Chapter 5, these policy areas are not prioritised which implies equal consideration for energy generation, oil

and gas, renewables shipping, ports and harbours, marine aggregates, interaction with terrestrial planning systems, local authority responsibilities, marine heritage, recreation, tourism, and defence activities in the marine area (Ibid). This leads to numerous contradictions. In addition to this, as part of the Defra family, the MMO maintains the remit of marine environmental protection and conservation which, in several instances, competes for legitimacy over developmental pressures. The Goodwin Sands marine licence case study appears as an exemplar for these contradictions in which marine aggregates, marine heritage, recreation and marine environmental protection all state a claim to precedence within the decision-making scenario.

The use of precedence, both in support and objection to the case study marine licence, is challenging, and clearly illustrates the tensions of competing legitimate uses. The historical precedence set by previous Goodwin Sands dredging activity appears convincing under this legitimate use clause (HM Government 2009a, s69(1); MMO 2018a; GS3.1). This is particularly so in relation to Seascape Character Assessments and the understanding expressed by marine heritage interviewees that historic maritime activity contributes to an areas character (DR:SA2). This appears supported by the Production of Space thesis, in which this activity becomes a productive force within the co-production of social space. The dissolution of the nature/culture binary within Anthropocene narratives discussed in Chapter 3 is also relevant here (Autin 2016). So too is the maritime heritage literature which sees advances in marine knowledge as a parallel development alongside marine usage (Duxbury *et al* 2002, p2; Smith & Potts 2005; Pinet 2013).

Consideration of legitimate use of the marine environment is further challenged by the physical and legal nature of marine public space. In terrestrial legitimacy claims, the clear physical and legal boundaries of private property delineate ownership. The fluidity of marine space challenges this, both in relation to the space of development and the reach of impacts (Steinberg & Peters 2015, p248; Pugh 2016; Yates *et al* 2017; Jay 2018; Peters & Steinberg 2019). As such, understanding marine space in all its fluid complexity is crucial for assessing impact and making decisions based on these assessments (Ibid). The clear link between marine development and marine knowledge claims, discussed in Chapter 3, is considered below in relation to the

validation of knowledge claims within EIA and marine licensing assessment and the definition and role of experts within these processes.

9.3.2. Language

Clear, unambiguous and accurate marine development assessments are crucial for ensuring effective and meaningful decision-making. The contradictions and vagueness present within both legitimate use of the sea definitions and policy objectives, discussed above, give little direction here for either public stakeholders or policy- and decision-makers. With contradictory, and often vague, legitimate uses applicable to any given marine area, the knowledge claims presented within EIA and the marine licensing decision-making process require consideration in relation to their validating power. Legitimacy is not based on these claims alone, but it does demonstrate how the EIA process within marine licensing and marine governance delivers legitimacy judgements within marine planning regimes. The use of language within these assessment documents is therefore an important area of discussion.

As the findings presented in Chapters 7 and 8 demonstrate, the supporting statements for marine development within impact assessments use specific language and rhetoric to present a clear and purposeful ideological mediation of the Goodwin Sands as a space suitable, and indeed desirable, for development (GS3). The separation of public and technical/professional stakeholder engagement, evidenced within the marine licence application case study, revealed a divergence in language used within technical and public-facing consultation documents. This appears to delegitimise the public representation of space. The importance of language within the Goodwin Sands EIA can be seen in several key areas, namely the Non-Technical Statement (NTS), the omitting of key technical details from the main report, and the definitions used for environment and marine resources. These are discussed below in turn.

It is rather self-evident that the language used within the NTS is non-technical (GS3.1). Unavoidable technical terms have been defined for the reader, An additional example, useful for this discussion, is found in section 5.3.2 of the NTS in which “diadromous [fish] species” are defined as “i.e. species that migrate between the marine and freshwater environment to spawn” (Ibid, p13). The inclusion of definitions such as this, when details of the assessments undertaken are absent appears to privilege document accessibility and readability over the provision of details regarding how the

assessments have been conducted and how these have led to the Environmental Statement (ES) conclusions. The reader must trust the validity and impartiality of the authors who have conducted these assessments and that “expert judgement has been applied where appropriate” (Ibid, p22). There is a clear distinction being made here regarding the audience of this NTS in comparison to the audience of the full ES document. This comparison appears analogous with the categories of “expert or technical knowledge claims, which might be contrasted with lay (or sometime local) knowledge claims” identified in the literature (Lee 2017, p4). This binary is understandable in relation to the origin of the claims but appears somewhat to assume that expert or technical knowledge claims are too complex for local – or ‘lay’ – audiences. The technical language of a full ES may indeed be inaccessible to some non-technical audiences however this binary distinction between technical and non-technical knowledge appears too simplistic and in the case study example this appears to result in an NTS in which assessment details are simplified to the point of distraction (GS3.1). A clear example of this is seen in the summary tables of impacts and proposed mitigation provided in the NTS which must be read in conjunction with the assessments undertaken in the ES for any justification of them to be possible (Ibid; GS3.2). Lefebvre’s observations of the “magic power” of binary distinctions which “turn obscurity into transparency” (Lefebvre 1991, p39) appears to apply to this separation of experts and non-experts. This binary is challenged by the examples of ‘non-expert’ expert knowledge claims included within the examples provided in Chapter 7.

Several discussion points emerge from this research in relation to access to information which impact the publicness of the Goodwin Sands. Firstly, the description of the dredge location as ‘the Goodwin Sands sandbank complex’ appears to mislead public respondents to the case study marine licence consultation exercises. The area to be dredged is a specific polygon within the sub-tidal sandbank complex and not located within the areas exposed at low spring tide (GS1; GS2; GS3). Public representations presented in Chapter7 appear to conflate the two although it is unclear here if it is on primary or secondary dredge impact concerns that these representations have been made (GS5; GS15; GS51). A second concern relates to the use of the term ‘significance’ as an example of the technical EIA language across the ES and NTS. Significance categories are outlined in Table 6.1 of the NTS (GS3.1, pp22) but ‘significance’ here is used in its technical definition in which any measureable impact

is defined in this way. This is contrary to the 'ordinary' definition of the term as synonymous with 'very'. The NTS analysed within the Goodwin Sands case study therefore evidences a separation of public from technical stakeholders within marine licensing. This discussion point is considered further in relation to public engagement and consultation in Section 10.3.3.

The purposeful use of language tropes within the main case study EIA documents is seen through specific definitions used and details omitted. The latter is evidenced through the omission of the caveat to the secured Crown Estate consent which limits dredge activity to a single dredge campaign (GS3.2, p22). This omission appears to legitimise, not only the request dredge campaign, but also potential future activity, and downplays the limitation of activity within the area made by the fully expressed consent wording. This strengthens the presentation of dredging in the area as an activity with historical precedence and part of the character of the Goodwin Sands. In other words 'you can dredge *but only this once*' dissolves into 'you can dredge'.

The particular use of specific definitions within the EIA text is seen within the definition of 'environment' as categorised into nature conservation, physical and chemical, biological and human (GS3.1, pp8). This appears to maintain binary separation between the human and non-human worlds against the narratives of the Anthropocene thesis (Crutzen & Stoermer 2010; Steffen *et al* 2011). This human/non-human environmental separation was seen in Chapter 3 to relate to the value judgements and environmental ethics which underpin environmental governance and decision-making (Karpiak & Baril 2008; Bjerke & Kaltenborn 1999; Gagnon-Thompson & Barton 1994). Within the case study marine licence the EIA appears based on ethics which conceive of this marine space as an aggregate resource, and which limits the area's intrinsic value by prioritising its status as a resource provider and economic asset.

No moral judgement can be made on the applicant here though, despite assertions made within the public representations submitted as part of the case study marine licence application. Claims of public benefit from the development can be made in both local and national terms, and so counter-claims of motivations based on purely private gain are too simplistic. The dredge campaign may be unpalatable for many public representatives however the impact assessments provided by the applicant conclude that the benefits of the scheme outweigh the negative impacts. An example of this is

seen in the contested assessment of alternative sources for the dredge material in which it is accurate to of using the closest source of aggregate to the site where it is needed (DR:DEV1; GS15; GS51).

An additional example of the challenge of applying moral judgement to the developer is found in relation to the assertion regarding the applicants responsibilities to shareholders through commercially sensible decision-making (DR:DEV1). This returns consideration to the multiple publics included within a decision scenario and the extent of development impact to be considered within environmental decision-making. These examples show the importance of considering the language used within development impact assessments, in relation to both the impacts being privileged and the perception of these statements from the point of view of objectors. In many cases seen in the Goodwin Sands case study, it is not so much the statements made but rather *the way they are made* or *the source of the statements* which is the cause of objection. This is seen clearly in the evidence presented in Chapter 7 regarding the mistrust towards the regulator, applicant and advisors within the decision-making process (DR:PG1; DR:PG2; GS15). If the data sources are perceived as untrustworthy then no amount of justification or explanation of assessment conclusions will mitigate objection. This is discussed below in relation to the inclusion and exclusion of knowledge claims within the marine licensing decision-making process.

One final discussion point regarding to the use of purposeful language in relation to publicness within decision-making builds on evidence from the case study marine licence itself. As evidenced in Chapters 7 and 8, the EIA Consent Decision Report was notably absent of the term ‘war grave’ (GS43). Throughout the analysis of this case study the contested nature of this term is clear ,with advisors questioning its accuracy in relation to the Goodwin Sands historic environment (GS4.9; GS14.12; GS15; DR:NSA1; Goodwin Sands SoS 2019b). Regardless of the accuracy of this representation of the Goodwin Sands, the omission of the specific term ‘war grave’ can be seen as a further delegitimising of the public for whom impact of war graves – whether physically or intangibly – was a key area of concern. This omission appears analogous with the technical use of the term ‘significance’ in relation to impacts discussed above and as such the use of language within the EIA Consent Decision Report could be seen as purely technical. However, this appears a stretch. An alternative interpretation of the motivation behind this omission is to mediate public

concern for this challenging receptor. This finds support within the Production of Space thesis in which representations of space wield ideological mediatory power.

9.3.3. Knowledge Claim Inclusion and Omission

The distinctly positivist approach to the EIA and marine licensing process has been seen within much of the evidence presented in the research findings. This applies not just to the main Goodwin Sands case study but to the case example marine licences too. Under this paradigmatic approach, only data which can be modelled for testing and evidenced through replication are deemed valid (Portney 1991; Brown *et al* 2002; Juntti *et al* 2009; De Santo 2017; Conroy & Peterson 2013). A clear example of this type of data is seen in the assessment of tidal dynamic impact within the Goodwin Sands marine licence ES (GS3.2, pp60). In this assessment, a prediction is made based on previous data and this prediction can be tested through a replicable and falsifiable method. In other words, the conclusions of the EIA can be tested post-consent through monitoring processes. There are several strands to unpick here. The definition of 'experts' within this process takes primacy, followed by the limitations of data categories defined as 'expert'. The complexity of perceptions of experts and non-experts throughout the process and within wider maritime and marine knowledge construction is also in need of discussion. Whilst the validation of all knowledge claims within marine licensing decision-making is unrealistic, and indeed likely to prove unhelpful, the consideration here is how conflict is managed and what these conflicting knowledge claims reveal which would be otherwise hidden if attention remained limited to expert data providers.

Definitions of 'expert' and 'non-expert' have been discussed above in relation to the treatment of technical versus public audiences for ES and non-technical assessment documents (GS3.1; GS3.2). As stated above, this binary distinction appears too simplistic to account for the range of data providers present within the Goodwin Sands case example marine licence. For example, the case study findings provide additional evidence of a clear separation between 'technical experts' and 'public- or lay-experts' within the licensing process. Protest group informants were bestowed the title of expert by protest group representatives and their data claims used to counter the 'other' experts working on behalf of the developer, regulator or advisors (DR:PG2). The data scepticism seen within protest group narratives is evidence of the mistrust in perceived

‘experts through qualification’ who support claims opposed to their own. It is not, therefore, as simple a conclusion as to state that for the protesting publics any non-local expert is to be mistrusted. This finds support in the literature discussed in Chapter 5 regarding the sceptical or hostile treatment of non-Welsh developers within Welsh offshore development public relations exercises (Haggett 2011).

Central to the discussion here is the evidence within the Goodwin Sands case study regarding the impact on marine spatial conceptualisation resulting from the omission – or inadequate inclusion – of non-technical expert data from impact assessments. The Goodwin Sands archival data presented in Chapter 8 provides useful material regarding historical perspectives on ‘experts’ and the validity of their knowledge claims. This perspective relies on technical experts as authority figures within their chosen fields, whose knowledge and opinion is to be respected. Additional evidence of this is found within the engineering sector in which marine civil engineers were tasked with the construction of large projects with little to no conditions imposed upon them. An example of this relates to the 19th Century marine engineer ‘Mr Walker’ who was cited with great reverence within archival texts (Gattie 1904). As an authority figure Mr Walkers testimony of the origin of the Goodwin Sands defined it as nothing other than “the natural consequences of the peculiar formation of the place and of the cross tidal currents upon it” (Holyoak 2008, p78; Gattie 1904). The same Mr Walker was appointed in 1853 to oversee the construction of the two piers at Tynemouth, North East England, and “left entirely unfettered within the limits of deviation … to select or modify any proposed plan, or to originate any other ones, as he shall deem[ed] proper” (TIC 1953)[58]. Two related points can be made here. Firstly is the observation, within the Tynemouth example, of the trust and authority placed solely with Mr Walker which allowed him absolute control of design and construction of the pier structures without additional discussion, agreement or consent. Secondly is the observation that this level of authority remains attached to Mr Walker within the more contemporary Goodwin Sands literature (Holyoak 2008). Evidence to counter the ‘expert’ status of this marine engineer is found in the actual construction of the Tyne Piers which took 50 years

[58] Material relating to the Tyne Piers archives was accessed during research undertaken as part of the 2017 Newcastle University Heritage Research Institute (NUHRI) Challenge Lab.

rather than the proposed 10 and were victim of several severe breaches by the North Sea before their completion (Hodgson 1903, p344).

Considering Goodwin Sands archival 'experts' in the context of their other achievements evidences a continuing contradiction within the consideration of experts by the public. Despite their known professional shortcomings, archival and historical experts appear to be perceived as authoritative whereas contemporary experts, whose status is confirmed through qualification, are met with hostile reception. Perhaps this scepticism towards 'experts' can be more easily understood through consideration of local versus non-local knowledge claim originators. Another articulation of this, which appears evidenced within interview data is the binary in which exerts are either 'with us' or 'against us' (DR:PG1; DR:PG2). There is a clear distinction here evidenced within the Goodwin Sands representations data presented in Chapter 8 in which the rhetorical question "who listens to the locals?" is used to snub non-local knowledge claims regarding marine development plans (NR:RT8). The literature here, however, attests to the importance of considering *both* local and non-local views within planning decisions (Munro *et al* 2017, p19; Tonin & Lucaroni 2017) and of considering the motivations behind attempts to engage with local communities in a way which attempts to evoke their values and interests ((Uitermark & Nicholls 2017, p38). In other words, it is important to understand the context within which a stakeholder can, or should, be included in the decision-making process and this may exceed place-based boundaries.

The validity of 'local knowledge' over and above 'expert knowledge' was evidenced within the qualitative interviews and within the public objections submitted in relation to the case study marine licence application. These findings invite consideration of how this 'local knowledge' gains its authoritative status. For environmental consultants and professionals within the EIA process, authority is given through adherence to professional standards and accredited courses of study. These 'experts by qualification' appear juxtaposed against local experts whose respect and knowledge claim validity is gained through social status and evidenced through experience. The Deal Boatmen introduced in Chapter 8 are a good example of this. This group of local fisherfolk – now greatly diminished in number – gain expert status in relation to their knowledge of the seas around East Kent through both historical and contemporary examples of enacting this knowledge (GS51; NR:RT8). This authority does not appear to fit within the matrixes of the EIA model of assessment. In stated examples within the

case study research the predictions of where a body lost at sea would be found are not based on repeatable models and quantitative data but rather an in-depth understanding of the seas formed through the lived experience of this social space (NR:RT8).

Memory and Anecdote

A connected discussion point here is the second-hand nature of these expressions of expert data claims. Most of the 'evidence' of the accurate predictions made by Deal Boatmen is anecdotal, or based on memory passed down from one individual to another. There are two related points here regarding memory and the use of anecdotes. The objection to dredging the Goodwin Sands based on memory of the devastation to Deal Beach following the last dredge campaign undertaken in the 1990's is a useful example of the first point. Local memory appeared the basis for several public objections and was also used to justify development objection within qualitative interview (NR:RT9; DRPG2). But basing environmental impact assessment on memory is problematic. This is largely outside of the remit of this thesis, however a brief consideration of this problem here is useful using cognitive neuroscience literature. The thesis that memory is fallible based on seven 'sins' – transience, absent-mindedness, blocking, misattribution, suggestibility, bias and persistence – provides useful insight (Schacter 1999, p1). It is worth decision-makers being aware of these potential memory mistakes when considering public representations, and here the positivist approach to environmental impact assessment appears more valid in terms of the evidence base. Caution is needed here. Whilst understanding of the potential for these memory 'sins' within public representation is useful, there is a risk of assuming public objectors to be wrong in their assertions based on this potential. The 'deviant' label attached to wind farm protesters as part of the set of assumptions held by planning researchers, discussed in Chapter 5, appears to rely on the existence of these unreliable memories to some extent (Waldo 2012, Aitkin 2010, Che *et al* 2016).

Reliance on memory for making valid data claims can be problematic, and so too can reliance on anecdotal accounts. The latter are related but separate from memories and are more likely to rely on the retelling of stories or value judgements. An example of the use of anecdote within the Goodwin Sands case study relates to the mistrust evident in relation to the perceived malpractice 'known' to occur on dredging vessels

when heritage assets are discovered within the cargo. The value judgement expressed here is that dredging crews are untrustworthy and this is formed through a third-hand account of malpractice being witnessed (DR:NSA1). In this example these anecdotal accounts are trusted more than the conclusions of impact assessments prepared by qualified experts in virtue of the accounts author. Here 'experts by experience' appear to trump 'experts by qualification' or 'profession'. It is tempting to dismiss these anecdotal claims as hearsay or gossip, and this appears again to confirm the assumption that objectors are 'deviant' (Waldo 2012, Aitkin 2010, Che *et al* 2016).

Objections based on memory or anecdote appear to rely on biased accounts. Whilst the data collected within a specific development proposals' EIA could be accused of mediating space through its representations which support the unproblematic development of the site in question, the data collected through wider voluntary projects must also be understood as not entirely without bias or motivation. Acknowledgement is also needed regarding the parallel development within marine usage and marine understanding discussed in Chapter 3 (Smith & Potts 2005; O'Neill *et al* 2008). An additional interview finding from the heritage sector illustrates this point well. Conservation and development are seen as not mutually exclusive. Pre-application surveys of proposed development areas can identify unknown heritage asserts which public bodies would otherwise not have the resources to explore (DR:SA2).

The Challenge of Recreational 'Experts'

The challenge of using recreational experts – where expertise has been gained through experience rather than qualification – for unbiased data collection is also seen in the use of non-standard methodologies for the collection and presentation of data. This was presented within findings from both heritage and conservation volunteers. In the former heritage assets in a local museum are displayed according to a desired narrative which the curator freely admits is achieved through selective displays and using "ugly dummies for the Germans" (DR:NSA1). For conservation volunteers the lack of absence data resulting from Seasearch dives within the NBN Atlas cannot be concluded as the lack of interest species in these areas. The lack of clarity regarding absence data makes using the resultant data within decision-making processes problematic (NBNatlas 2019; IR:CB2; IR:CB3). As volunteers pay to attend dives it

invites speculation regarding the potential for more ecologically and biologically diverse and 'interesting' sites to be privileged in this dataset (IR:CB2).

A final discussion point in this sub-theme considers the knowledge claims made by the case study marine licence protest group. The views expressed by some public representations, and acknowledged, in part, by the group members themselves, of the protest group include them being a 'bunch of middle aged housewives' with no claim to legitimacy of opinion in relation to the Goodwin Sands application. The evidence presented in Chapter 7 of the enjoyment and hobby-like attitude expressed by the protest group invite critique. Here again the assumptions of planning research appear to be expressed within developer value judgements towards the group. Spending some 'lovely afternoons in the archives' (DR:PG1) does not necessarily lead to deviance towards development. The amateur or voluntary status of knowledge claims appears delegitimised in this example. Whether this de-legitimisation is motivated through a desire to ideologically mediate social space for developer gain, based on problematic assumptions about the role of public objectors, or expresses a different view requires contemplation.

9.4. Marine Space as Public Space

This section provides discussion related to the research question (RQ1) '*what is the publicness of the sea?*' Firstly, the representations of the Goodwin Sands based on case study findings presented in Chapter 8, are discussed and this then leads to the application of the public space models introduced in Chapter 2. Following this, the Goodwin Sands case study marine licence findings from Chapter 7 are used to supplement the representations research and public space models. Public space is defined as *more-than-physical,* and as such access to decision-making processes which affect the site are also considered as part of its abstract public space. The implications of the case study findings on the conceptualisation of marine space as public space more widely are then explored.

9.4.1. Goodwin Sands as a Public Space

The Goodwin Sands case study findings presented in Chapter 8 clearly evidence the importance of spatial values and meanings formed through a socio-spatial process of

conceiving and defining space. The abstract layering of spatial representations appears analogous with the literal sedimentation of aggregate which forms the perceived space of the Goodwin Sands. As such, the historical process of the accumulation of meaning is inextricably linked to the physicality of the space. This comes as no surprise within the Production of Space thesis (Lefebvre 1991; Shields 2001; Janzen 2002; Elden *et al* 2003; Elden 2004; Fuchs 2019). That the meanings and values attributed to the Goodwin Sands are dependent on their physicality is a necessary consequence of their experience. But this co-productive relationship also works in other directions. The conceived space of the Goodwin Sands, seen within the multiple representations presented within the case study findings, exerts productive power on the lived experience of entering the space. In other words, prior knowledge of conceived space – maps, images, myths etc – affect how a visitor experienced the space upon entry to it. Understanding this is crucial for considering how best to manage the space (Merrifield 2006, p109; Lefebvre 1991).

The use of Goodwin Sands as a site for recreation, as presented in Chapter 8 results in an awkward conceptualisation of the space. From historical accounts of cricket matches (Gattie 1904) to contemporary expressions of this activity (IR:MU4; Hayward 2017) along with barren searches for wreck material and confused GPS running route tracks (Evans 2019) the Goodwin Sands appears represented as a blank canvas given meaning through absence. Lack of perceived material 'stuff' becomes a feature of place whilst contemporary devices such as GPS sports trackers conceive it as a non-place. This notion of the sea as a non-place finds historic support in the literature. Cartography charts the oceans as empty imply its limited worth to humanity (Steinberg 1999a, pp410). Conceiving of marine space as a "physical 'blank canvas', brought into existence through human action" (Dimendberg 1998, p19), or as "a perfect and absolute blank" (Steinberg 1999a, p411), greatly devalues the evidenced attachments and meanings associated with this space. Conceiving of marine space as a featureless void space also ignores evidence gained through the oceanographic sciences (Pinet 2013; Duxbury *et al* 2002). Contemporary expressions and broadcast media narratives of abundance of both species and human detritus in world oceans also discredits this conception (BBC 2001; BBC 2017a; BBC2017b).

Representations of Goodwin Sands which apply the terms 'empty' or 'featureless' to them, are anthropocentric in nature. This does not imply that they are incorrect as any

one space can be represented in a plethora of ways dependent on the motivations or *ideological mediation,* to use Lefebvrean language, behind the conceptualisation. In comparison to the representations of Goodwin Sands within the case study application EIA these recreational representations of the social marine space as an empty container for activity appear to provide less 'concrete' detail than the environmental descriptions of the perceived space which form support for the application. As the findings show, these application spatial representations separate 'human environment' from other physical environmental categories (nature conservation, physical and chemical, and biological) (GS3.1). This allows for a description of the Goodwin Sands as a space which is both *empty* of the evidence of human activity – structures etc – and *full* in relation to other physical spatial features (Ibid, pp8). Of course, this is contentious given anthropogenic impact on non-human systems within the Anthropocene thesis (Defra 2004). The point here is that the physical descriptions within the EIA provide detailed representations of the Goodwin Sands to different scales and focus compared to historical cultural accounts. The 'emptiness' which forms part of the appeal and description of the Goodwin Sands as recreational activity space appears more accurately to be described as 'unknown' on 'inhospitable'. Likewise the descriptor 'open' could apply.

Building on this representation of a *special sort of emptiness* inherent in the Goodwin Sands is the desire to protect such spaces for the sake of activities novel to the landscape. Evidence of this is presented in Chapter 7 in the form of public representations submitted in objection to the case study application which desire to preserve the Goodwin Sands as a recreational space as an expression of the "quirkiness of Britishness" (GS15.350). The concern expressed here is that the potential destruction of the sandbanks through dredge activity presents a barrier to the potential for public access. This is seen in the protest group acknowledgement and desire that whilst "vast numbers of people won't visit [Goodwin Sands]… they *should* be able to if they wish" (DR:PG Email). Reference to wider narratives of human interaction and use of the sea within the literature is useful here. This sees the development of knowledge of the marine environment as intimately linked with the desire to explore it (Schiller *et al* 2016, Hardinsty 1990, Weyl 1970, McBreen *et al* 2011). Noted here is the separation of *legal* access and *accessibility* to spaces and freedom of access in both its positive and negative conceptions. Legally the Goodwin

Sands remains accessible to all whilst this open access is seen “in principle though not necessarily in practice” (Neal 2010, p1).

The Goodwin Sands cricket matches in particular appeal to conceptions of marine space which embrace their fluidity (Steinberg 2013; Bremner 2013; Steinberg & Peters 2015; Pugh 2016; Yates *et al* 2017; Jay 2018). The emergence of this specific activity through the case study research was found within additional island studies literature. Recent research into social cricket events on temporarily exposed English sandbanks introduces the term ‘aquapelago’ (Hayward 2017, p2). This “combined terrestrial and marine space created by human livelihood activity” (Ibid) is seen as territorialising areas of the sea in which temporary social events such as cricket result in “a particular kind of temporary territory for short durations whose associations accrue to and affect ensuring perceptions of particular locations” (Ibid, p3). This appears to support the Production of Space thesis through the acknowledgement that the lived experience of undertaking usually terrestrial activities within this peculiar temporality accessible marine space acts as a productive force on the meaning of the social space.

The conception of the Goodwin Sands as an empty space (IR:MU4 for example), sacred in this regard, and to be protected as a rare place untouched by human impact, is therefore juxtaposed with the Goodwin Sands case study narratives which illustrate a continuous human presence within the area. These are seen through representations formed from shipwreck accounts and through mythology and legend formation (Gattie 1904; Carter 1953; GS5; GS15; GS51). Juxtaposition is also seen between the richness of spatial descriptions within the EIA representations of geophysical and biological space, and the historical and contemporary representations of space portrayed in archival material and public representations (Gattie 1904; Carter 1953; GS3.1; GS3.2). Both provide rich descriptions of the Goodwin Sands but their focus appears exclusive of the other. This is a cause of hostility between developer and public protesters within the case study marine licence (GS5; GS15; GS51; DR:DEV1; DR:DEV2; DR:PG1; DR:PG2; Port of Dover 2017a, 2017b). The public perception of the developer providing limiting[59] accounts of the nature of the Goodwin Sands is

[59] Rather than limited. These are limiting in relation to the use of representations of space to devalue certain aspects of the social space.

evidenced through representations submitted as part of the marine licencing consultation process and expanded in interview data. The consideration of the developmental impacts which appear inadequate in their attention towards social, and cultural receptors appears to be perceived by the protest group as an ideological mediation of space in which the developers' power is asserted for their own financial gain (DR:PG1; DR:PG2; GS15). Crucial here is reflection on the assessment of value-laden social conceptions of space within the currently marine licensing and EIA regimes (Blount & Pitchon 2007; Morris & Therivel 2009; Tengberg *et al* 2012; Dalton *et al* 2015; Hooper & Austen 2013). Opposing parties within the licensing decision-making process may conclude that a specific area 'at risk' of development necessitates a level of description which takes account of all the complex multitude of spatial representations through physical and non-physical descriptors, values, beliefs and uses. This is, however, pragmatically impossible under the current marine licensing process, as this discussion chapter has discussed. The sedimentation of values ascribed to the Goodwin Sands as a physical, or 'natural' space, find support in the literature. The findings of the Goodwin Sands case study appear as a clear expression of the assertion that "nature is perhaps the most complex word in the language, wrought with all manner of histories, geographies, meanings, fantasies, dreams and wish images" (Swyngedouw 2010, p299, Jasanoff 2004).

Whilst this discussion has made explicit the complexity of meanings associated to the Goodwin Sands and argued that the production of space thesis allows for a deeper articulation of the space, this remains account of the Goodwin Sands remains theoretic. This is a useful exercise in order to later assess how successful marine licence decision-making processes are at addressing these abstract and complex space meanings. In the following sub-section the case study findings are used to apply a series of public space models to the Goodwin Sands which provide a more practical and pragmatic assessment of the space.

9.4.2. Applying Public Space Models to the Goodwin Sands

Upon completion of the Goodwin Sands field work data collection and analysis, presented in Chapters 7 and 8, and following the discussion above, the findings were used in conjunction with the public space models introduced in Chapter 2 to analyse the publicness of the Goodwin Sands.

The first model to be utilised within this analysis is based on Parkinson (2012) and considers the Goodwin Sands as public or private based on the categories of access, benefit, rights and responsibilities and ownership. The results are displayed in Figure 9.3.

	Public	Private
1. **Access**	Free right to navigation; no exclusion zones in operation (Legally Accessible)	Physical Access Limited by location (Physically Inaccessible)
2. **Benefit**	Cultural benefit includes physical and non-physical heritage; myths; stories; values	Permission required to dredge aggregate
3. **Rights and responsibilities**	Publically managed by MMO	Port of Dover commercial interests being met through dredge licence
4. **Ownership**	Aggregate resource managed by The Crown Estate	

Model template: Parkinson 2012, p684

Figure 9.3 Goodwin Sands as Public or Private

Using this model, the Goodwin Sands can be considered public on account of their legal access status and the free rights of navigation which apply to them. However the geographical limitations to their physical access and the monopoly of tour operator providing public access does limit their physical accessibility. In terms of 'benefit' the publicness of the Goodwin Sands depends on the tangibility of this category. Cultural benefit is well evidenced from archive and contemporary representations of the area. Resource or instrumental benefit requires permission through the marine licensing and Crown Estate permitting regimes. Considering the rights and responsibilities attached to the Goodwin Sands also provide contradictory results, and the ownership status can be argued as either public or private depending on perceptions of the status of The Crown Estate as public or private organisation or benefactor. This model for public versus private space is therefore inadequate for dealing with the physical access constraints intrinsic to offshore spaces and the complexity of the management and ownership status in operation for the Goodwin Sands.

Considering the publicness of the Goodwin Sands using the public space model based on Madanipour (2003) provides a more nuanced analysis. This is presented in Figure 9.4.

Category	Sub-Category	Sub- Category Definition	Application to Goodwin Sands
Access	Physical Access	A space which is accessible to all	Goodwin Sands accessible to all in legal sense. However location and tides prevents easy physical access. Only the intertidal is accessible without specialist equipment
	Access to activities and discussions	A Space where the activities and discussions taking place in it are accessible to all	As above, access to activities within the site are limited to the ability to reach the intertidal sand banks.
	Access to Information	A space where the information about it is accessible to all	Contested accounts of the nature of the area. Information not in public realm (i.e. licence application data) could be made available via Freedom of Information request
	Access to resources	A space where the resources are accessible to all	Dependent of definition of resources. Aggregates extraction requested by anyone with the means to do so. Socio-cultural (identity and value forming) resources such as myths and stories accessible to all
Actor/ Agency	Control	A space which is controlled by public actors; that is, the agents or agencies who/which act on behalf of a community, city, commonwealth or state.	Use of the area for marine development managed by MMO as public body
	Use	A space which is used by the public	Limited contemporarily physical use with additional historical accounts. Non-physical use evidenced through myths, stories and other cultural evidence
Interest	Interest	A space which serves the public interest, that is, the benefit of which is controlled and received by all members of the society	Strong sense of public interested being served through local cultural attachment

Model based on Madanipour 2003

Figure 9.4 Goodwin Sands Public Access, Actors and Interest

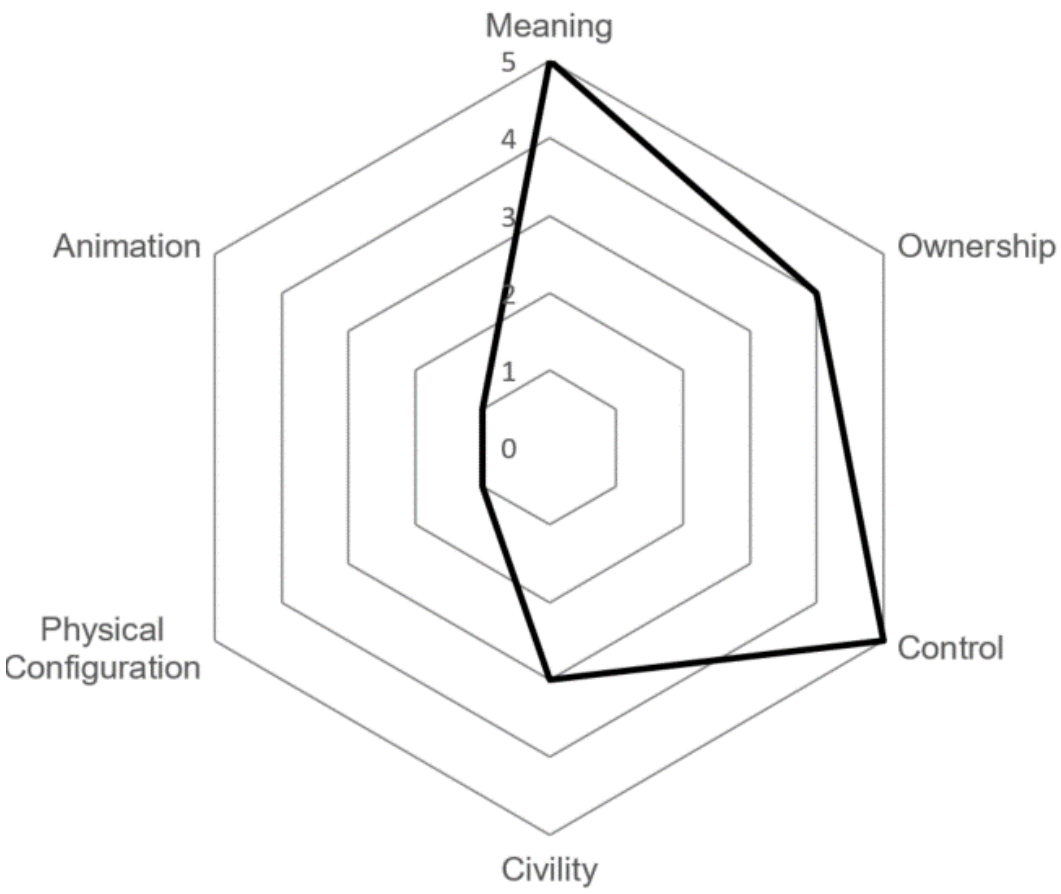
In this more detailed approach, access is considered in four sub-categories. Here again considering publicness in relation to access depends on the definition used. A further complexity concerning access is based on the method through which physical access is measured. Due to the intertidal and subtidal physicality of the Goodwin Sands case study area access to public space can be analysed in relation to submerged or exposed areas of the sandbank. Vessel access is only available at high

tides with some areas remaining navigationally dangerous to enter. Vessel draft is also a consideration here. As described in Chapter 8, access by foot is only available at particular low tides.

The remaining access categories are evidenced through the case study marine licence and conclusions here are determined by stakeholder perceptions of the decision-making process and the level of public engagement undertaken. The fact that the Goodwin Sands is both a publicly managed collective resource – through MMO management and cultural heritage – *and* a site of commercial interest – through aggregates extraction – further limits definitive conclusions on the publicness of this space on this model.

In both of these models, it is with explicit reference to interest (or benefit) that the Goodwin Sands most clearly displays its publicness. These cultural benefits and public interests are evidenced within the findings of both the case study marine licence application public objections and within the historical and contemporary Goodwin Sands representations. This publicness displayed within interest and benefit attached and gained from the Goodwin Sands does, however, also present key findings regarding the existence of conflicting publics within spaces. That the public is not a single and homogeneous category within any given public space is given clear expression within these research findings. As such, the use of these public space models must be understood as only providing a criteria for evaluation and, importantly, these models are not intended to find or describe spaces as purely ‘public’ or ‘private’.

The final public space model applied to the Goodwin Sands is the star model attributed to Varna & Tiesdell (2010) which illustrates this intention most clearly. The results of this application are presented in Figure 9.5.



MEANING

Many groups regard this space as public. Evidenced from interviews, archival material and public representations

OWNERSHIP

Owned by TCE on behalf of the Public. Some private use through aggregates extraction

CONTROL

Free use (legally); absence of control presence, surveillance or security

CIVILITY

Open to debate based on the management of the area by the MMO

PHYSICAL CONFIGURATION

Inaccessible at high tide without diving equipment (access here defined as physical access to stand on sands). Navigational access is limited to high tide (access defined as sailing)

ANIMATION

Limited range of potential uses and activities

Model based on Varna & Tiesdell 2010; Varna 2014

Figure 9.5 Goodwin Sands Star Model

Applying the Star Model to the Goodwin Sands, using the case study findings, provides more detail than binary public/private space distinctions. Applying this model implies that the definition of a space as a public space is *a priori* to considering its publicness. The model therefore tests the hypothesis that a space is public. Considering the Goodwin Sands using this model appears to confirm its public space status, and the limitations to its publicness can be included but without removing it from the public realm. Physical configuration must, necessarily, be defined as low in this model due to the limitations of both vessel and foot access. Likewise the tidal nature of the area prevents animation scoring highly. However, the high publicness rating within the categories of meaning, ownership and control are evidenced from the research findings. This is particularly clear within the meaning category and regardless of the public considered within given representations of the sandbank in this category as in the interest and benefit categories within the previous models that the publicness of the Goodwin Sands is most clearly expressed.

When applied to the Goodwin Sands these public space models present the space as an example of the public realm, defined in Chapter 2, as an "abstract kind of public space… filled with ideas, opinions, and debates about issues of public interest" (Neale 2010, p4). This abstraction of physical marine space appears a necessary conceptual step in order to overcome the challenges of applying more urban-focused public space models (Parkinson 2012; Akkar 2005; Varna & Tiesdell 2010). Of the public space models applied to the Goodwin Sands in this research it is the Star Model (Varna & Tiesdell 2010) which provides the most nuanced analysis of the publicness of this space based on its meaning.

Application of the public space models presented in this sub-section helps conceptualise the Goodwin Sands, but only after time and effort have been taken to understand the 'concrete' – as opposed to the abstract – nature of the space (Lefebvre 1991, p40). Notable here are the limitations of any model in which the abstraction of spatial moments by considering them independently risks a failure to grasp this concrete[60] space (Ibid). Considering the social space of the Goodwin Sands more

[60] As distinct from immediate space

holistically implies working towards understanding the multiple representations attached to the area along with its perceived space and lived experience. This is discussed as an implication of this marine public space approach in sub-section 10.2.3 below.

The need to understand a social space through more than its physicality is clear from the application of the public space models to the Goodwin Sands. Physical access constraints appear to limit publicness within the models based on Parkinson (2012) and Madanipour (2003). The concepts of positive and negative liberty can be applied to discussions here to help dissolve this constraint (Berlin 1969). There appears no coercion at play in the physical inaccessibility of the sandbanks for vessels during low tide or of foot visitors during high tide. This duality of freedom is useful in considering the publicness of space in relation to why a space is considered as inaccessible. Physical inaccessibility – or challenge – is distinct from legal inaccessibility. Indeed the numerous tales of cricket and other terrestrial pursuits taking place on the sandbank attest that this challenging physicality is part of the enjoyment (Gattie 1904; Hayward 2017). The important point here is that the Goodwin Sands remains *legally* accessible. Rights of navigation extend to its entirety even if common sense and maritime safety require the imposition of limitations (Gattie 1904; Carter 1953; IR:MS2). This is reminiscent of the New Jersey surfers introduced in Chapter 2 (Craghan & DeFilippis 2000). Unlike this example the Goodwin Sands are not subject to local authority closures and instead operational constraints of tour guides and the natural rhythms of the tides limit access.

9.4.3. Implication of Public Marine Space Thesis

The Goodwin Sands case study findings presented in Chapter 8, and the public space models applied to the area above, invite contemplation on marine public space more widely and to the implications of applying public space models to the marine environment. Starting with the latter, it is clear that the public space models applied to the Goodwin Sands do not adequately capture the unique fluidity of marine space. This is uncontentious given the models' urban studies origin (Madanipour 2003; Parkinson 2012; Varna & Tiesdell 2010).

This current thesis does not propose an alternative model for assessing the publicness of marine spaces however this is suggested as potential for further research in Chapter

10. The public space models used in this thesis have been applied to the Goodwin Sands to demonstrate the area's publicness and to invite discussion of its qualities which evade capture within traditional public space definitions. Using the Production of Space thesis as conceptual framework has demonstrated how the multiple representations of space which are created within a specific social space apply equally to terrestrial and marine sites. This is evidenced within the representations of the Goodwin Sands presented in Chapter 8 and it is these representations along with the numerous and often contradictory spatial and non-spatial uses of Goodwin Sands that challenge our conceptualisations of space. The implication of this for public space models is to privilege consideration of the 'public access' category[61]. In other words, the principle of 'access' is the primary criterion in defining publicness. For marine space it is necessary to take the broadest meaning of access as the defining criterion. This includes physical and legal access *and* access to the process of spatial value and meaning creation.

There are several key implications of these findings. There is an obvious distinction between publicness of a place and what can, or should, be done within it. Public access to the sea can be understood as maintaining accessibility to the space for all. However physical access is not the end of the story and it is here that the public access criterion related to access to activities and discussions, and to information, become of clear significance. (Madanipour 2003). This also links clearly to public interest (or meaning) within public space models (Ibid; Parkinson 2012; Varna & Tiesdell 2010). How normative considerations of what is permissible within a marine public space are addressed raises the problem of multiple and conflicting publics (Craghan & DeFilippis 2000; Gray el at 2010; Crawford 2018; Davoudi 2018). Considering the ecological aspect of the sea is also included in these normative thoughts which reintroduces a non-human element to the multiple publics (Hillier 2001, p73; Smith & Brennan 2012). The ethical judgements and core beliefs discussed in Chapter 2 are useful here to explore the conflicting instrumental and meaningful approaches to the sea (Wilkinson 1999; Kortenkamp & Moore 2001; Keller 2010). Of central importance is the legitimacy of these value claims as discussed in Section 9.3 in relation to the research findings

[61] Or 'Physical Configuration' and 'Control' categories within the Star Model (Varna & Tiesdell 2010)

regarding marine expert and non-expert knowledge claims and data scepticism within marine licensing decision-making.

9.5. The Publicness of the Sea within Marine Development Assessment and Licensing

This final discussion section draws together the themes explored throughout this chapter, and provides a response to the main thesis research question '*What is the relationship between the publicness of the sea and the process through which marine development is assessed and consented within the English marine licensing?*'

Taking Sections 10.2 and 10.3 together allows for a consideration of the publicness of marine licensing and wider governance processes. More fundamentally, taking Sections 10.3 and 10.4 together, this section considers the relationship between 'publics' and 'developers' within the marine environment. Seeing marine licensing as a mediating factor between these two groups leads to implications regarding how development and public interest can be co-created within this decision-making sphere. In other words, how can sustainable development in the marine environment be managed in a way which navigates the contested values within certain marine spaces?

The Production of Space thesis remains a key theoretical framework here, while the procedures of marine spatial planning provide pragmatic discussion. In other words, the Production of Space thesis is utilised through the conceptualisation of marine licensing decision-making processes as a key component to the spatial production of sites, such as the Goodwin Sands, where development is being contested.

Marine licensing operates within a co-produced public space in which its physical fluidity is reflected in the dynamic, and often contested, multiple meanings, associations and imaginaries attributed to it. The complexity of this space is further illustrated within contemporary representations of marine space. The timing of this research in relation to the Blue Planet Two documentary series in autumn 2017 allowed for an additional dimension of the publicness of marine space to be considered. The influence of media representations of marine and other non-human spaces was explored in Chapter 3 evidencing the known impact of media on public attitudes and

behaviour. These contemporary representations of more-than-human worlds find their origins in Apollo 8 imagery and further back to the Copernican revolution (Jasanoff 2004, Speth & Hass 2006). The increased public engagement with specific conservation projects attributed to Disney animated films such as *Finding Nemo* and *Shark Tale* (Jones 2014, p5) was replicated within the case study research in relation to the 'Blue Planet Effect' within the findings presented in Chapter 8. The increased interest in beach cleaning juxtaposed with a seeming unwillingness to take one's own litter home (DR:SA1), combined with the increasing use of social media to arrange and document marine conservation activities (Beachclean 2018; MBA ND; Shark Trust ND; BRC ND; IR:CB2). This risks isolating marine space concerns to specific, social media status-raising activities, and the over-prioritisation of charismatic species protection associated with both fictional and non-fictional media portrayals (Kaiser 2011).

Whilst this thesis intends no offence towards successful media series, high production values and engaging narratives do risk outcompeting the resource-limited descriptions of marine development impact found within project applications, assessments and marine licensing decision-making reports. The resource-limited marine licensing consultation process cannot compete with the level, and quality, of engagement displayed within high-cost documentaries. It is, indeed, possible that the existence of such series as Blue Planet 2 result in unreasonable demands for impact assessment data collection from developers. Pragmatism is important here.

Related to this tension is the use of myths and stories to give meaning to marine spaces. In the main Goodwin Sands case study the representation of space included those in which myths and stories imbue the area with both geographical and cultural significance. These representations appear, at first, to be amusing and of limited productive value, however without their consideration within social space conceptualisation the 'concrete' nature of the space is limited to the ideological representations which are privileged within the marine planning system. The cultural importance of these myth-based representations is evidenced through the extent to which these legends have become productive forces within the Goodwin Sands social space. In this way their objective 'truth' is of little relevance. There is a strong sense of Christian ideology present here, supporting literature reflections on the cartographical descriptions of marine space in which imagery dragons and sea monsters present representations of space far more detailed and meaningful than the spatial practice

they represent (Steinberg 1999a; Kirby & Hinkkanen-Lievonen 2000). Here again pragmatism is required. While these representations add meaning to social space they are resource-intensive to research and the nature of these accounts – based on memory and anecdote – have a subjective quality which is challenging to address within positivist based EIA and marine licensing application assessments. Put simply, due to its quantitative approach, EIA is unable to accommodate such accounts. Indeed these historic representations, as displayed and evidenced within the Goodwin Sands case study, are not damaged by contemporary marine development. They remain regardless of productive forces at play within the spatial practices of social space. But this does not make them irrelevant.

These historical, and arguably nostalgic, accounts of marine space differ from contemporary media representations with regards to the relationship between human activity and the marine environment. The story of the Goodwin Sands as a special place – and as an abstract public space – through the production of its identity and meaning, is not complete without consideration of the spatial uses which form part of this identity. There appears to be an attempt to delegitimise certain marine activities within this recourse to historical maritime uses of the Goodwin Sands. C*ertain* uses of the sea are allowed, and indeed encouraged, and these uses become part of the representations which define the area's *character.* The history of Goodwin Sands development proposals appears to define marine space as a transport surface, and therefore safe navigations is legitimised above other activities. This inclusion of historical uses as part of the character of an area concurs with the co-production of space in which use of that space – through continual feedback loops with the physical space itself –forms its meaning (Lefebvre 1991; Eldon 2004). These considerations require attention in order to understand the concrete character of a social space ,and in so doing to understand the representations which appear incompatible with development. Again, these historical accounts, seen in the main Goodwin Sands case study, are not physically impacted by marine development. This is directly relevant to the public objections to the Goodwin Sands marine licence made over concerns of disturbance to war-graves. Even after the assurances of detailed surveys, exclusion zones and other measures to mitigate any potential impact on unknown wreck the objections remained (GS13; GS17; GS22). It appears here that it is the *principle* of damaging the final resting place of Battle of Britain pilots which of as much concern as

actual physical disturbance (DR:PG1; Goodwin Sands SOS 2019b). This is about respect.

These considerations of the importance of non-physical representations for the concrete meaning of social space appear limited within marine development assessment and licensing. They are complicated, contradictory and often have limited or no tangible evidence. They are not, in other words, material planning considerations (MHCLG 2018).

Through its use of representations of space MSP aims to simplify the complexity of marine environments. Marine licensing aims to manage this complexity through quantifiable evidence-based decision-making. But something appears to be lost within these pragmatic, and necessary, simplifications. The epistemological and ethical questions regarding the human relationship with the non-human – or more-than-human – marine environment remain. Understanding that multiple environmental ethical positions exist within stakeholder communities and publics for a specific development proposal, allows for more meaningful engagement with the representations being voiced. In other words, marine decision-making based on "dominant utilitarian approaches to environmental policy [is] not consistent with the existence of plural and incommensurable values" (O'Neill *et al* 2008, p91).

Being mindful and understanding of symbolic logics which differ from the majority view, or seem deviant from presupposed assumptions regarding public perception, is also of crucial importance here. Care is needed to ensure that consultation material and application assessments themselves are accessible to wide audiences of non-expert stakeholders and that new information provided through public representation is considered with due care and attention. Another way to approach this discussion is through consideration of the multiple value-judgements underpinning symbolic logics, and beliefs about the environment more generally. The hostile reactions seen within some attempts to consult with specific publics, seen in the Welsh example, discussed in Chapter 5 are here understood as the articulation of a challenge to the core beliefs and ethical underpinnings of stakeholder environmental values. In other words, where these values clash, or are perceived to clash by certain stakeholders, conflict arises.

For controversial marine licence applications local historical bad relations appear to find expression within the licensing process, and regulators need to acknowledge the

potential for this. Recommendations to address this specific issue are included in Chapter 10. The goal here is not to overcome objection – or correct *deviant* opinions – but rather to understand how best to communicate with publics within communities where tensions between stakeholders are felt. This is applicable to all marine licence applications. The importance of understanding the local significance of marine spaces is crucial for ensuring meaningful public consultation. This is achieved through not only increased resource within the assessment of development impacts, but also through engaging with the non-expert data submitted within the decision-making process. While it is acknowledged that not all of this data is verifiable, or indeed relevant to planning decision-making, engaging with these public representations – both in the sense of marine licensing objections *and* representations of space in the conceptual sense – allows for the publicness of marine space to be acknowledged and maintained.

This discussion of the research findings and related secondary literature has focused on the *process* of marine licensing with regards to how the evidence based for decision-making is produced and the final decisions are made. The technocratic nature of marine licensing is not necessarily a limitation to the consideration of the publicness of the sea, from the perspectives of access to discussions and control. What is important here is how public expressions of objection are dealt with within a system absent of democratic accountability. Recommendations to achieve this are included in Chapter 10.

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Chapter 10. Conclusion

10.1. Introduction

This final chapter commences by responding directly to the research questions and addressing the aims and objections stated in Chapter 1. This draws heavily on the discussion presented in Chapter 9 and therefore limits its scope to a summary of these themes. The key academic and theoretical contributions of this research are then stated, and justified, along with summary recommendations and further research possibilities. These recommendations and further research suggestions are included to illustrate the value of the research findings for both marine planning research and practice. The importance of including both evidences the relationship between academic research and the implementation of research findings within planning policy and practice.

The chapter ends with reflection on the research process and concluding remarks which draw the thesis to a close.

10.2. Response to Research Questions

The research questions presented in Chapter 1 were formulated to address the main aim of the research which was to explore how the sea as a public space – and the associated publicness of the sea – is considered within marine licencing decision-making. This aim was accompanied by research objectives. These included providing a conceptualisation of marine space as a public space, defining the publicness of the sea and justifying why this is beneficial for marine licensing decision-making. A detailed case study was considered as an appropriate methodology to satisfy these aims and objectives. The sub-research questions addressed below were also used to structure the research and allow for an in-depth and systematic exploration of the main research question, presented in Chapter 9 and summarised in Section 10.2.4.

10.2.1. The Publicness of the Sea

RQ1. What is 'the publicness of the sea'?

In this thesis the sea has been conceptualised as a social space co-produced through the spatial moments of perceived and conceived space and lived experience. This

conceptual approach based on Lefebvre (1991) has been used to explore claims of publicness within a specific case study marine area. This social space is inherently public and its meaning is formed through its spatial practices, representations of space and representational space (Lefebvre 1991). Chapter 8 focused on understanding the multiple representations of space which exist for the Goodwin Sands. In so doing a social space was evidenced through a more concrete description than the ideologically mediated representations found within the case study marine licence application documents.

Through considering representations of space for a given area, the publicness of the space can be assessed. The more detailed the account of representations is, the more meaningful the results of using public space models will be. In the Goodwin Sands case study these models confirm that the space is public and allow observations to be made of areas where publicness is challenged.

The publicness of the sea is found in its accessibility – although not necessarily its physical accessibility – in its interest and in its ownership. It is found in its meaning and civility too, however these are threatened when development decision-making processes limit public engagement with issue resolution and determination debates.

10.2.2. The Publicness of Marine Governance Institutions

> *RQ2.1. How public are the marine governance institutions and legal and political frameworks within which English marine licensing operates?*

The research shows that publicness is exhibited within marine governance institutions and legal and political frameworks within which marine licensing in England seas operates. The findings presented in Chapters 5 and 6, and discussed in Chapter 9, evidence the intention for these institutions and frameworks to operate as an expression of public interest within the public realm. The extensive evidence of consultation within the development of English marine policy presented in Chapter 5 allows for the conclusion that these governance institutions are public. The NDPB status of the MMO as delivery body for these governance framework confirms its publicness.

Marine policy itself is more problematic in relation to its publicness. The formulation of marine priorities without hierarchy introduces opacity to the policy framework which

limits its accessibility. That said, the justification for this non-hierarchical approach appears as an acknowledgement of the fluid nature of marine space both in relation to future marine uses and to the meanings ascribed to the space at a local level. In the absence of completed marine plans for many of the English marine areas the outcome of this framework policy formulation cannot yet be fully considered.

The implementation of marine policy within the marine licensing decision-making process expresses some claims to publicness, however improvements to the public consultation and engagement processes would be required to further this claim. The details of this are summarised below, illustrating the strong relationship between governance and process.

10.2.3. The Publicness of Marine Development Decision-Making Processes

RQ2.2a. What is the marine development decision-making process?

RQ2.2b. How public is the marine development decision-making process?

These two research questions refer to the marine development decision-making process and therefore the ‘what’ has been used to contextualise and respond to the ‘how’.

As delivery body for marine licence decision-making in English waters, the MMO has been the focus of research discussions regarding the publicness of the decision-making process. Several critiques of the current system have been presented through this research based on the findings presented in this thesis within the empirical research Chapters. Whilst the justification of certain perceived limitations evidenced within MMO representative interview data, presented in Chapter 6 and explored further in Chapter 9, are credible, there remain issues to address.

The lack of engagement by the public within the majority of marine licence applications, and all of the case example applications presented in Chapter 6, invites scrutiny of the efficacy of the public consultation process utilised. It is not enough here for regulators to assume that the absence of comment means the absence of concern. The main Goodwin Sands case study presented findings which could be considered as evidencing both successful and unsuccessful public engagement, dependent on which stakeholders’ perception is being privileged here. This dependency does imply room for public consultation process improvements in this case.

The marine development decision-making process itself can be considered public in relation to the ability for publics to comment on marine licence applications. The wider question is whether, and how, to raise public awareness of this process. All marine licence applications are available on the MMO's public register along with contact details for submitting comments and discussing applications. This, however, appears to fall short of public accessibility in the eyes of objecting publics. Noting the technocratic nature of the MMO's marine licensing process is also relevant here, with the accusation levelled against the organisation that it lacks democratic accountability. This appears as an unwarranted attack and omits acknowledgement of the potential political forces at play within terrestrial planning committee decisions. Maintaining a decision-making process run by 'technical experts' relieves political pressure but this must make adequate consideration of public representations and non-expert data if publicness is to remain within the process. However, if the public are more easily able to comment then it is likely that the process would become more political, with decision-makers needing to consider and pass judgement on the value statements present within public representations. This may, in turn, necessitate the need for the involvement of elected representatives within the marine consenting system.

10.2.4. The Relationship between the Publicness of the Sea and the Marine Development Assessment and Consenting Process

> *Overarching Research Question: What is the relationship between the publicness of the sea and the process through which marine development is assessed and consented within English marine licensing?*

The relationship between the publicness of the sea and the marine development assessment and consenting process is inherent within the nature of social space. The impact of development itself on the publicness of the sea is also considered here with the consenting of marine activity legitimising particular marine uses, and in so doing acting as a productive force within social space.

The extent to which publicness is impacted by marine development rests on a number of factors. Public benefit can be both gained, and lost, through the consenting of a particular marine development project, depending on the impact scale utilised for this assessment. Local impacts can be outweighed by national or global benefit using a

utilitarian calculous. Direct impact on the publicness of the sea can be made through the introduction of exclusion zones around marine development.

The overarching response to this research question, based on the findings and discussion presented in this thesis, is that it is clear that cases exist in which the publicness of the sea - or a specific marine space – have not been considered within the assessment and licensing process to an extent acceptable for publics who consider themselves impacted by the development proposal. The findings evidence the need for regulators to consider the efficacy of their public consultation processes and the way in which assessment data is sourced and validated. Dismissing representations of the sea which contradict expert knowledge, or are deemed non-material considerations, ignores the underlying social production of marine space. Acknowledgement is also needed here that representations presented within marine licence assessment and determination are necessarily Representations of Space, and therefore can only, as discussed within the conceptual framework presented in Chapter 4, provide mediated accounts of both the material and lived spaces which are impacted by these decisions.

The implication of conceptualisation of marine space as public within marine licensing is necessarily circular. Marine licensing decision-making forms part of the co-production of space through its legitimisation of spatial practice activity. This activity, in turn, is reflected in the representations of this altered perceived space. The lived experience of a space is mediated through these moments, which, in turn, affects the representations made of it. In other words, marine licensing decisions change the fabric of space. Anything less than acknowledgement of this as an impact on social space risks marginalising publics who produce representations and have lived experience of that social space.

10.3. Key Contributions

The key academic contributions of this research are closely linked to recommendations for implementing this theoretical approach into marine planning policy and practice. Further research is suggested for how the recommendations could be explored within academic study. The contributions, recommendations and areas for further research are summarised in Figure 10.1.

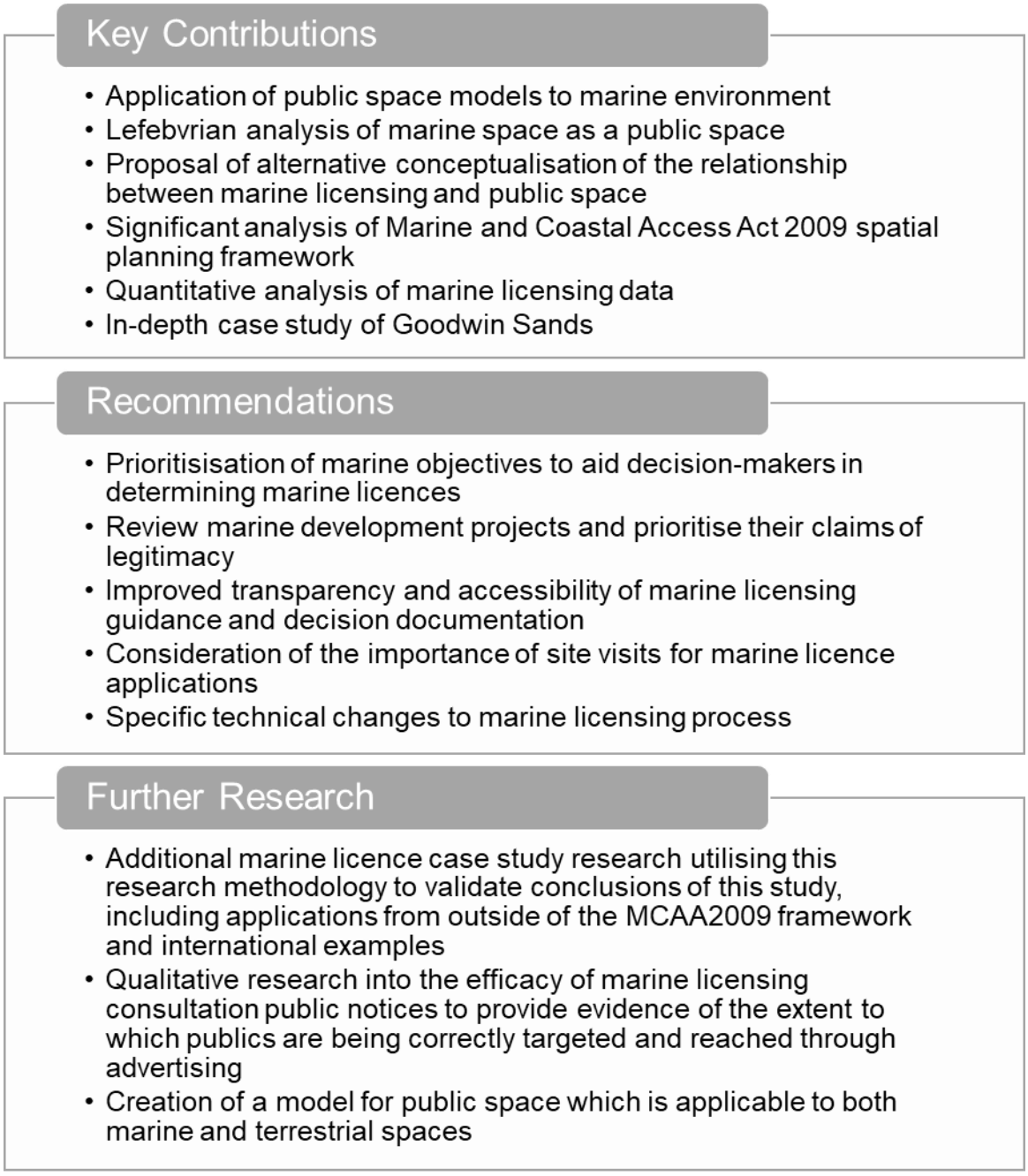

Figure 10.1 Summary of Research Contributions, Recommendations, and Further Research

10.3.1. Academic and theoretical contributions

This research has provided a novel approach to considering how marine licensing decision-making impacts marine space. Key contributions support this claim of originality and are detailed below.

Application of urban design public space models to the marine environment has contributed to a greater understanding of the complexity and contested values and meanings associated with the sea. This research contributes to a deeper understanding of marine space in its conceptual form, which allows for greater understanding of the issues at play within controversial marine licence determinations. Utilising Lefebvre's Production of Space thesis has allowed for an alternative consideration of the marine environment compared to those within which MSP in the UK operates. This theoretical framework is considered as *strengthening* rather than *challenging* the paradigmatic ecosystem based approaches (EBA) through its ability to locate and understand cultural and social meanings and values located within a place. Using a *spatial* rather than *environmental* model for analysing development impact does not detract from the latter, but rather allows for an exploration of how to determine public/social acceptability of marine environment uses through legitimacy of activity and precedence.

Aside from conceptual contributions, this research is significant in its analysis of the marine licensing process operating in England under MCAA2009. It provides a comprehensive analysis of the first ten years of the MCAA2009 marine licensing regime by considering the extent to which the aims stated during the Marine Bill's formulation have been implemented through MMO decision-making. It therefore provides valuable findings related to policy and process weaknesses for which recommendations are made below.

The main Goodwin Sands case study provides not only a unique and detailed analysis of the English marine licensing process, but also adds to the literature related to the history and meaning of the area. The findings of spatial representations of the Goodwin Sands presented in Chapter 8 form a detailed narrative of the development of meaning in this area and bring the historical accounts up to date.

The value-laden knowledge claims which form the multiple meanings associated to marine space have been widely discussed within this research in relation to their inclusion and consideration within marine development impact assessment. This thesis contributes a novel approach to considering the question of *what, and indeed who, the marine environment is for,* and how marine licensing can best serve this contested space of multiple meanings and layered values. The critique of the EIA process

presented within the case study marine licence application presents a challenge to practitioners and policy makers to include qualitative data within an inherently quantitative and positivist assessment technique.

The overarching research contribution is a pragmatic exploration of marine development assessment and decision-making within the publicness of the sea. This pragmatic approach is important for research impact and is expressed within the recommendations presented below.

10.3.2. Recommendations

Recommendations resulting from this research are directed towards the English marine regulatory context however application could be amended for wider implementation.

Policy and legislation

At the time of thesis submission the regional marine plans for England are still being finalised and it is acknowledged that these proposed plans do provide additional policy direction regarding spatial uses within marine areas. However, the complexity of marine policy in England - including those areas applicable to the devolved UK administrations – limits its ability to provide direction to regulators, applicants and public stakeholders. Providing a more prioritised policy framework would give strategic direction for marine development and potentially lessen objection in cases where legitimate uses are in conflict. This would also provide transparency for public stakeholders regarding the governance of English seas and allow for meaningful debate on marine priorities.

No substantive review of national marine legislation or policy has been undertaken in the decade since the enactment of MCAA2009 and the publication of the Marine Policy Statement. This research recommends that this is undertaken based on a review of the efficacy of the marine licensing system and the novel marine development projects now being proposed.

Decision-making process

There is a clear need for the marine licensing decision-making processes to be made more accessible to both stakeholder and public audiences. The lack of marine licence

appeals is acknowledged as inconclusive in relation to the conclusions which can be drawn from this regarding to the decision-making process. The incompleteness of marine licence public register libraries does, however, support the hypothesis that publics do not comment on marine licences due to being unaware of their existence. This finding contradicts the MMO's claim that it is accountable and transparent in its decision-making. Two specific recommendations are made here. Firstly, that the marine licence application data is made accessible through user-friendly systems. Secondly, decision-making guidance is made available which explains the assessment and determination process in sufficient detail for both technical and non-technical audiences to understand.

In addition to these recommendations regulators should not be averse to refusing licence applications. This would allow them to exhibit more regulatory authority and challenge applicants to improve the quality of their submissions including pre-application consultation. When applications are submitted, the regulator should consider site visits to the development area as an important exercise within the decision-making process. This will allow for a more concrete understanding of the context in which licence applications are being considered prior to licence determination. There are two parts to this. Firstly, for offshore areas it is acknowledged that site visits may yield information not worth the resource intensity of visiting. However, this is a pre-determination of the limited value of an area and should be avoided. Where sites are deemed 'low risk' from desk analysis drone technology could be employed to 'visit' the site remotely. Local regulator office staff could also be utilised to conduct these site visits. Relying on third-party representations alone to make marine licensing decision greatly detracts from a case officer's ability to make a valid determination of development impact.

What is important here is gaining and understanding of the context in which proposed development occurs, and acknowledging that local stakeholder conflicts could be finding expression within the licensing process. To this end consideration of any local historical tensions between developer and publics would be useful.

In addition to local context, this research recommends that consideration of how qualitative representations and non-expert data can be included in marine assessment and decision-making be undertaken. The inclusion of qualitative data within the

decision-making processes should be considered as being as valid as the quantitative data and positivist approach inherent in the EIA paradigm *as it appears to be practiced within marine development management*, even if the conclusions of this data is 'non-material' and later justified out of the decision-making remit. Acknowledgement of these representations would greatly improve public trust in the process. Practitioner engagement with amendments to EIA theory would also be beneficial here.

Recommendations regarding amendments to public consultation processes are not possible based on the research findings of this thesis. This is a key area of further research, discussed below.

10.3.3. Further Research

Several areas of further research can be identified as valuable based on the findings and discussion presented in this thesis.

Undertaking additional marine licensing case studies would test the conclusions of this current research. It would be beneficial for these to be undertaken both within the marine licensing regime and outside of it. The latter could consider both nationally significant infrastructure projects consented under PA2008, and/or using international examples for comparison of decision-making frameworks and processes.

Additional research focused on both the developer and regulator perspectives of public consultation and engagement would be advantageous. Collaborative research within each of these sectors would provide additional depth to understanding not available within the confines of this research project. Advisory bodies could be subjected to similar further research collaboration.

Additional research into the efficacy of the marine licence public consultation process – with specific focus on application public notices and the extent to which they reach their target audiences – would be of extreme merit. This would entail securing collaborative research with the MMO, or relevant marine regulatory body, to undertake a detailed review of these processes. Further consideration of how appropriate publics are identified, targeted and reached through the current process would also be of value.

Finally, it has been explicitly acknowledged that this research was not intending to produce a new public space model for direct application to marine spaces. Creating

such a model would involve multiple case studies of marine areas when the focus of this research was on the *process* through which marine public space is regulated. Additional research in this area would be highly valuable in relation to how marine space is conceptualised and this, in turn, would strengthen the recommendations of this current research.

10.4. Research Reflection and Concluding Remarks

Reflecting on research provides an opportunity to explore the successes and challenges faced and propose alternative strategies should the research be repeated. The researcher's reflection on the research process is presented below and supplements the research limitations and ethical challenges set out in the methodology in Chapter 4.

10.4.1. Reflection on Research Process

Novel areas of research are characteristically challenging and this thesis substantiates this claim. This research was conceived from a desire to explore the difficulties faced within marine licensing, in relation to the conceptualisation of the sea used within decision-making. Previous regulator employment meant that the researcher was considered a professional expert upon entry into Newcastle University and this had both benefits and challenges. An in-depth working knowledge of the marine licensing system was useful for understanding the research 'problem'. The challenge here was in responding to this problem without reliance on unsubstantiated pre-knowledge. Doing so would risk bias within the research findings. Researcher positionality assumed that privileged access to MMO staff and process information would be easily gained, and this proved not to be the case. It is with significant regret that this assumption was misplaced. If this lack of engagement had be known from the outset then the proposed research could have taken a different methodological approach with perhaps increased engagement with the Goodwin Sands protest group through a Participatory Action Research methodology. However, it is acknowledged that, due to the nature of the research questions, there would be an inherent risk of biasing the results by utilising this methodology.

Returning to academia presented additional challenges for the researcher in relation to working styles, in particular the isolation felt during the research process. This was

partly due to the niche discipline and was alleviated with continued external networking with non-academic contacts. Stylistic challenges faced in relation to thesis drafting were inherent from previous regulator and private sector working. Overall, the research has been demanding but satisfying and as a first generation post-graduate the successful completion of this thesis is a source of great personal pride.

The methodological limitations and ethical considerations presented in Chapter 4 presented challenges for the research to overcome. The challenges in securing participant engagement were unpredictable and resulted in the need for the methodology to change shape as the research evolved. This has, however, led to stronger conclusions regarding the publicness displayed within published marine regulatory documentation.

Due to the limited literature specifically related to marine development management (as opposed to MSP as a strategic discipline) it has been necessary to maintain a wide scope within this research. This does limit the depth achieved in any one area and the further research suggested above is presented as a way to address this limitation.

The single case study approach could be critiqued for being unrepresentative of marine licence determination more widely. This is acknowledged, however due to the desire to provide an in-depth application of the production of space thesis to a marine public space including additional case studies would have resulted in unmanageable data collection and analysis. The inclusion of the smaller case examples mitigates this critique and the further research suggestions present an opportunity for additional detailed case studies to be undertaken

10.4.2. Concluding Remarks

This thesis has provided several key contributions for the MSP literature. The recommendations presented in this chapter enable the findings to be used to benefit both marine policy and practice as well as advancing academic MSP research.

This research aimed at providing an alternative conceptualisation of the marine space which is subject to marine licence decision-making, in which the lived experience of the sea can be more fully included. This is necessary in order for marine space to be managed as a public space, and for this to transpire the complex, fluid and never-stable co-production of marine space must be acknowledged as both *part of the marine*

environment assessed within development proposal *and created by* such proposals. This is by no means a simple task and requires marine regulators to engage in meaningful public engagement and consultation during licence determination. Organisational resource deficiencies is no defence here; the marine environment requires, in virtue of its very public nature, a very public response. Marine space is not infinite, and current processes and development pressures risk a return to the 'out of sight, out of mind' attitudes of early maritime uses. Utilising the current media-induced increase in public marine concern can, and should, allow policymakers, regulators and researchers to continue research in this area. This is important in order to ensure that the voices of the publics included within the co-production of marine public spaces have access to the decision-making processes which impact those spaces. Removing the expert/non-expert binary is key here. Including non-technical experts within the assessment and decision-making process should be seen as an opportunity to improved marine spatial understanding. 'Who listens to the locals?' needs the response: 'marine decision-makers with an interest in managing marine social space for the publics which help to co-produce it'.

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References

Aas, C., Ladkin, A. & Flecter, J. (2005), Stakeholder Collaboration and Heritage Management, *Annuals of Tourism Research,* 32, 28-48

Adams, D. (1980), *The Hitchhikers Guide to the Galaxy*, Harmony Books, New York

Aitken, M. (2010), Why we still don't understand the social aspects of windpower: a critique of key assumptions within the literature, *Energy Policy*, 38, 1834–1841.

Akkar, M. (2005), The changing 'publicness' of contemporary public spaces: a case study of the Grey's Monument Area, Newcastle upon Tyne, *URBAN DESIGN International*,10, 95–113

Allen, J. (2002), "On Georg Simmel: Proximity, distance and movement" in Crang, M. & Thrift, N. (eds) *Thinking Space*, Routledge, New York

Allmendinger, P. (2011), *New Labour and Planning: From New Right to New Left*, Routledge, London

Ansong, J., Gissi, E. & Calado, H. (2017), An approach to ecosystem-based management in maritime spatial planning process, *Ocean & Coastal Management*, 141, 65-81

Antique Maps (2020), 17th Century Nautical Chart of the North Sea / Virtual Map Fair [ONLINE] Available at: http://www.antiquemaps-fair.com/showimg.php?Img=images/large/i_109/12083.jpg&Title=17th%20Century%20Nautical%20Chart%20of%20the%20North%20Sea%20/%20Virtual%20Map%20Fair (lasted accessed 10 January 2020)

Arkema, K., Abramson, S., Dewsbury, B. (2006), Marine ecosystem-based management: from characterization to implementation. *Front. Ecol. Environ.*, 4(10), 525–532

Arnold, T. (1995), *The Coldest Place in England: A History of Deal, the Sea and the Goodwin Sands*, Joem Gallery, Deal

Atlas Obsucra (2016), Can You Spot all the Sea Monsters in this 16th-Century Map? [ONLINE] Available at: https://www.atlasobscura.com/articles/can-you-spot-all-the-sea-monsters-in-this-16thcentury-map [lasted accessed 10 January 2020]

Autin, W. (2016), Multiple dichotomies of the Anthropocene, *The Anthropocene Review,* 3(3), 218-230

Barry, J., Ellis, G. & Robinson, C. (2008), Cool Rationalities and Hot Air: A Rhetorical Approach to Understanding Debates on Renewable Energy, *Global Environmental Politics*, 8, 67-98

Basta, C. (2017), On Marx's human significance, Harvey's right to the city, and Nussbaum's capability approach, *Planning Theory*, 16(4), 345-363

BBC (2001), *The Blue Planet: Seas of Life*, BBC One, 12 September 2001

BBC (2017a), *Blue Planet II*, BBC One, 29 October 2017

BBC (2017b), *Blue Planet 2: How plastic is slowly killing our sea creatures, fish and birds* [ONLINE] Available at: http://www.bbc.co.uk/newsbeat/article/42030979/blue-planet-2-how-plastic-is-slowly-killing-our-sea-creatures-fish-and-birds [last accessed 6 December 2019]

BBC (2019a), *High tides and rain put South coat on alert* [ONLINE] Available at: https://www.bbc.co.uk/news/uk-england-49876427 [last accessed 6 December 2019]

BBC (2019b), *Who rescues migrants in the Channel?* [ONLINE] Available at: https://www.bbc.co.uk/news/uk-46758600?intlink_from_url=https://www.bbc.co.uk/news/topics/cp7r8vgl2rgt/reality-check&link_location=live-reporting-story [last accessed 5 February 2019]

BeachClean (2018), *Welcome page* [ONLINE] Available at: https://beachclean.net/ [last accessed 5 February 2019]

Beatley, T. (2014), *Blue Urbanism: Exploring Connections Between Cities and Oceans*, Island Press, Washington DC

Beckett Rankine (2013), Proposal for Providing Additional Airport Capacity in the Longer Term: Goodwin Airport [ONLINE]: Available at: http://www.goodwinairport.com/?lang=en [last accessed 2 February 2019]

Bedau, H. (1991), "Ethical Aspects of Environmental Decision Making", in Chechile, R. & Carlisle, S. (eds), *Environmental Decision Making: A Multidisciplinary Perspective, Van Nostrand Reinhold*, New York

Berlin, I. (1969), “Two Concepts of Liberty,” in *Four Essays On Liberty*, Oxford University Press, Oxford, England

Biedenweg, K., Stiles, K. & Wellman, K. (2016), A holistic framework for identifying human wellbeing indicators for marine policy, *Marine Policy,* 64, 31-37

Bijma, J., Pörtner, H., Yesson, C., & Rogers, A. (2013), Climate change and the oceans – What does the future hold? *Marine Pollution Bulletin, 74*(2), 495-505.

Bjerke, T. & Kaltenborn, B. (1999), The Relationship of Ecocentric and Anthropocentric Motives to Attitudes Toward Large Carnivores, *Journal of Environmental Psychology*, 19, 415-421

Blackmar, E. (2006), “Appropriating ‘the commons’: The Tragedy of Property Rights Discourse”, in Low, S. & Smith, J. (eds), *The Politics of Public Space*, Routledge, Abingdon

Blount, B. & Pitchon, G. (2007), An Anthropological Research Protocol for Marine Protected Areas: Creating a Niche in the Multidisciplinary Cultural Hierarchy, *Human Organisation,* 66(2), 103-111

BMAPA & English Heritage (2003), *Marine Aggregate Dredging and Historic Environment* [ONLINE] Available at: http://www.bmapa.org/downloads/reference.php [last accessed 24 January 2017]

Boesch, D. (1999), The role of science in ocean governance, *Ecological Economics*, 31, 189-198

Bonar, P., Bryden, I. & Borthwick, A. (2014), Social and ecological impacts of marine energy development, *Renewable and Sustainable Energy Review,* 47, 486-495

Börger, T., Beaumont, N., Pendleton, L., Boyle, K., Cooper, P., Fletcher, S., Haab, T., Hanemann, M., Hooper, T., Hussain, S., Portela, R., Stithou, M., Stockill, J., Taylor, T. & Austen, M. (2014), Incorporating Ecosystem Services in Marine Planning: The Role of Valuation, *Marine Policy*, 46, 161-70

Boucquey, N., Fairbanks, L., St, Martin, K., Campbell, L. & McCay, B. (2016), The ontological politics of marine spatial planning: Assembling the ocean and shaping the capacities of ‘Community’ and ‘Environment’, *Geoforum*, 75, 1-11

Bowen, R., Depledge, M., Carlarne, C. & Fleming, L. (2014), *Oceans and human health: Implications for Society and Well-Being*. Chichester, Wiley Blackwell

Boyes, S. & Elliot, M. (2015), The excessive complexity of national marine governance systems – Has this decreased in England since the introduction of the Marine and Coastal Access Act 2009?, *Marine Policy*, 51, 57-65

BRC (ND), *Welcome to iRecord* [ONLINE] Available at: https://www.brc.ac.uk/irecord/ [last accessed 5 February 2019]

Bremner, L., (2014), Folded Ocean: The spatial transformation of the Indian Ocean world. *Journal of the Indian Ocean Region*, 10(1), 18-45

Breslow, S., Sijka, B., Barnea, R., Basurto, ., Carothers, C., Charnley, S., Couthard, S., Dolsak, N., Donatuto, J., Garcia-Quijano, C., Hicks, C., Levine, A., Mascia, M., Norman, K., Poe, M., Satterfield, T., St. Martin, K. & Levin, P. (2016), Conceptualizing and operationalizing human wellbeing for ecosystem assessment and management. *Environmental Science and Policy*, 66(C), 250-259

Brierley, A., & Kingsford, M. (2009), Impacts of Climate Change on Marine Organisms and Ecosystems. *Current Biology, 19*(14), 602-614.

Brousseau, E., Dedeurwaerdere, T. & Siebenhüner, B. (2012), *Reflexive governance for global public goods*, MIT Press, Cambridge, Massachusetts

Brown A., Vandekerckhove, W. & Dreyfus, S (2014), "The relationship between transparency, whistleblowing, and public trust", in Ala'I, P. & Vaughn, R (eds), *Research Handbook on Transparency*, Edward Elgar, Cheltenham

Brown, A. (2006), *Contested space: street trading, public space, and livelihoods in developing cities*, ITDG Publishing, Rugby

Brown, K., Tompkins, E. & Adger, W. (2002), *Making Waves: Integrating Coastal Conservation and Development*, Earthscan, London

Byantt, A., Fothergill, A., Holmes, M., & Attenborough, D. (2001), *The blue planet: A natural history of the oceans*, BBC, London

Byrne, B. (2006), "Qualitative interviewing" in Seale, C. (ed), *Researching Society and Culture*, Sage Publishing, London

Carmona, M. & de Magalhaes, C. (2008), *Public Space: The Management Dimension*, Routledge, London

Carpenter, G (2017), *Not in the Same Boat: The Economic Impact of Brexit Across UK Fishing Fleets, New Economics Foundation* [ONLINE] Available at: https://neweconomics.org/2017/11/not-in-the-same-boat [last accessed 12 January 2020]

Carr, S., Francis, M., Rivlin, L. & Stone, A. (eds) (1992), *Public Space*, Cambridge University Press, Cambridge

Carson, R., Zwinger, A. & Levinton, J.S. (1991), *The Sea Around Us*, Oxford University Press, New York

Carter, G. (1953), *The Goodwin Sands*, Constable & Co Ltd, London

Castro, P. (2007), *Marine biology 6th ed*., McGraw-Hill Education, Maidenhead

Caveen, A., Polunin, N., Gray, T., & Stead, S. (2014), *The controversy over marine protected areas: Science meets policy*, Springer, London

Chan, K., Settlerfield, T. & Goldstein, J. (2012), Rethinking ecosystem services to better address and navigate cultural values, *Ecological Economics*, 74, 8-18

Channel Swimming Association (2019), *Swim Results* [ONLINE] Available at: https://www.channelswimmingassociation.com/swims [last accessed 5 February 2019]

Chechile,R. (1991), “Introduction to Environmental Decision Making”, in Chechile, R. & Carlisle, S. (eds), Environmental Decision Making: A Multidisciplinary Perspective, Van Nostrand Reinhold, New York

Chi, C., Ruuska, I. & Xu, J. (2016), Environmental impact assessment of infrastructure projects: a governance perspective, *Journal of Environmental Planning and Management*, 59(3), 393-413

Christmann, G. (2009), “Expert Interviews on the Telephone: A Difficult Undertaking”, in Bogner, A., Littig, B. & Menz, W. (eds), *Interviewing Experts*, Palgrave, Basingstoke

Clark, M., Herington, J., & Institute of British Geographers Geography Planning Study Group (1988), *The Role of environmental impact assessment in the planning process,* Mansell Publishing, London

Clarke-Sather, A., Crow-Miller, B., Banister, J., Thomas, K., Norman, E. & Stephenson, S. (2017), The Shifting Geopolitics of Water in the Anthropocene, *Geopolitics,* 22(2), 332-359

Collie, J., Adamowicz, V., Beck, M., Craig, B., Essington, T., Fluharty, D., Rice, J. & Sanchirico, J. (2013), Marine spatial planning in practice, *Estuarine Coastal and Shelf Science*, 117, 1-11

Conroy, M. & Peterson, J. (2013*), Decision Making in Natural Resource Management: A Structured Adaptive Approach*, Wiley, Hoboken N.J.

Costanza, R., D'Arge, R., Farber, S., Grasso, M., Hannon, B., Limburg, K., Naeem, S., O'Neil, R., Paruelo, J., Raskin, R., Sutton, P. & Van Den Belt, M. (1997), The Value of the World's Ecosystem Services and Natural Capital, *Nature*, 387(6630), 253-60

Craghan, M. & DeFilippis, J., (2000), The nearshore as public space: controlling access to the coastal ocean, *Urban Geography*, 21(3) 193-204.

Crang, M. & Thrift, N. (eds) (2009), *Thinking Space*, Routledge, London

Crawford, J. (2018), Constructing 'the coast': the power of spatial imaginaries, *Town Planning Review,* 89(2) 108-112

Crowder, L. & Norse, E. (2008), Essential ecological insights for marine ecosystem-based management and marine spatial planning, *Marine Policy*, 32, 772-778

Crowdjustice (2019), *Help us protect the Goodwin Sands from destruction by dredging* [ONLINE] Available at: https://www.crowdjustice.com/case/help-us-save-the-goodwin-sands/ [last accessed 15 December 2019]

Crutzen, P. & Stoermer, E (2000), The Anthropocene, *Global Change Newsletter,* 41, 17–18.

CSPF (2019), *Channel Swimming and Piloting Federation: Homepage* [ONLINE] Available at: CSPF.co.uk [last accessed 5 February 2019]

Daily, G. (1997), *Nature's Services: Societal Dependence on Natural Ecosystems*, Island Press, Washington DC

Dalton, G., Allen, G., Beaumont, N. Georgakaki, A., Hacking, N., Hooper, T., Kerr, S., O'Hagan, A., Reilly, K., Ricci, P., Sheng, W. & Stallard, T. (2015), Economic and socio-economic assessment methods for ocean renewable energy: Public and private perspectives, *Renewable and Sustainable Energy Review,* 45, 850-878

Darbi, WP. & Hall, C. (2014), Elite interviews: critical practice and tourism, *Current Issues in Tourism*, 17(9), 832-848

Davies, J. (2016), *The Birth of the Anthropocene*, University of California Press, Oakland California

Davoudi, S. (2018), Policy and Practice. Spatial imaginaries: tyrannies or transformations?, *Town Planning Review,* 89(2) 97-107

DCLG (2006), *Marine Mineral Guidance 1: Extraction by dredging from the English seabed*, HMSO, London

DCLG (2012), *National Planning Policy Framework* [ONLINE] Available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf [last accessed 2 August 2017]

de Groot, R., Brander, L., van der Ploeg, S., Costanza, R., Bernard, F., Braat, L., Christie, M., Crossman, N., Ghermandi, A., Hein, L., Hussain, S., Kumar, P., McVittie, A., Portela, R., Rodriguez, L., ten Brink, P. & van Beukering, P. (2012), Global estimates of the value of ecosystems and their services in monetary units, *Ecosystem Services,* 1, 50-61

de Juan, S., Gelcich, S. & Fernandez, M. (2017), Integrating stakeholder perceptions and preferences on ecosystem services in the management of coastal areas, *Ocean & Coastal Management*, 136, 38-48

de Santo, E. (2017), California dreaming: Challenges posed by transposing science-based marine protected area planning processes in different political contexts, *Environmental Science and Policy,* 75, 38-46

Deal Museum (2016), *Stories and Myths from the Goodwin Sands (The Shyppe Swallower)*, Deal Museum, Deal

Defra (2002), *Safeguarding Our Seas*, HMSO, London

Defra (2004), *Review of Marine Nature Conservation, Working Group report to Government*, London, Defra

Defra (2007), *A Sea Change: A Marine Bill White Paper*, HMSO, London

Defra (2008a), *Managing our marine resources – licensing under the Marine Bill*, HMSO, London

Defra (2008b), *Summary of responses to the public consultation on the draft Marine Bill from 3 April 2008 – 26 June 2008*, HMSO, London

Defra (2008c), *Managing our marine resources: The Marine Management Organisation*, HMSO, London

Defra (2008d), *Impact Assessment of the Marine Bill - Final Version* [ONLINE] Available at http://webarchive.nationalarchives.gov.uk/20090731132403/http://www.defra.gov.uk/marine/legislation/key-docs.htm [last accessed 14 February 2018]

Defra (2008e), *Marine and Coastal Access Bill Policy Document* [ONLINE] Available at http://webarchive.nationalarchives.gov.uk/20090731132403/http://www.defra.gov.uk/marine/legislation/key-docs.htm [last accessed 14 February 2018]

Defra (2010a), *Government guidance to the Marine Management Organisation (MMO) on its role in relation to applications, and proposed applications, to the Infrastructure Planning Commission (IPC) for development consent under the Planning Act 2008*, HMSO, London

Defra (2010b), *Second consultation on secondary legislation under the Marine and Coastal Access Act: Part 4 Marine licensing*, HMSO, London

Defra (2010c), *Consultation on a marine planning system for England*, HMSO, London

Defra (2010d), *UK Marine Policy Statement: A draft for consultation*, HMSO, London

Defra (2010e), *An initial summary of responses to The UK Marine Policy Statement: A draft for consultation (21 July 2010 – 13 October 2010)*, HMSO, London

Defra (2010f), *Government response to the consultation on secondary legislation under the Marine and Coastal Access Act: Part 4 Marine licensing*, HMSO, London

Defra (2010g), *Charting Progress 2: An Assessment of the State of UK Seas*, Defra, London

Defra (2011a), *Guidance on Marine licensing under Part 4 of the Marine and Coastal Access Act 2009*, HMSO, London

Defra (2011b), *Summary of responses to the consultation on a marine planning system for England and related Impact Assessment*, HMSO, London

Defra (2011c), *A description of the marine planning system for England*, HMSO, London

Defra (2018), *Goodwin Sands Recommended Marine Conservation Zone: Consultation on Sites Proposed for Designation in the Third Tranche of Marine Conservation Zones, June 2018* [ONLINE] Available at: https://consult.defra.gov.uk/marine/consultation-on-the-third-tranche-of-marine-conser/supporting_documents/Goodwin%20Sands%20Factsheet.pdf [last accessed 5 February 2019]

Defra (2019), *Defra Data Service Platform* [ONLINE] Available at: environment.data.gov.uk [last accessed 18 November 2019]

Deleuze, G. & Guattari. F. (1988), *A Thousand Plateaus. Translated by Brian Massumi*, Athlone, London

Dellino-Musgrave, V., Gupta, S. & Russell, M. (2009), Marine Aggregates and Archaeology: A Golden Harvest? *Conservation and Management of Archaeological Sites,* 11(1), 29-42

Dimendberg, E., (1998), “Henri Lefebvre on Abstract Space”, in Light, A. & Smith J. (eds), *Philosophy and Geography II: The Production of Public Space*, Rowman & Littlefield, Lanham

Domínguez-Tejo, E., Metternicht, G., Johnston, E. & Hedge, L. (2016), Marine Spatial Planning advancing the Ecosystem-Based Approach to coastal zone management: A review. *Marine Policy, 72*, 115-130

Douvere, F. (2008), The importance of marine spatial planning in advancing ecosystem-based sea use management, *Marine Policy*, 32, 761-771

Douvere, F. & Ehler, C (2009), New perspectives on sea use management: Initial findings from European experience with marine spatial planning, *Journal of Environmental Management,* 90, 77-88

Dover District Council (2018), *White Cliffs Country: Dover, Deal Sandwich 2019 Guide* [ONLINE] Available at: https://live-newwhitecliffscountry-dover.cloud.contensis.com/Plan/Plan-your-visit.aspx [last accessed 6 December 2019]

Dover Museum (NDa), *Bronze Age Boat: The worlds oldest known seagoing boat* [ONLINE] Available at: https://www.dovermuseum.co.uk/bronze-age-boat/bronze-age-boat [last accessed 5 February 2019]

Dover Museum (NDb), *Channel Swimming Dover: Celebrating the history and record of channel swims* [ONLINE] Available at: https://www.channelswimmingdover.org.uk [last accessed 5 February 2019]

Dovey, K., (2013), "Planning and Place Identity" in Young, G. & Stevenson, D. (eds), *The Ashgate Research Companion to Planning and Culture*, Ashgate, Farnham

Drankier, P. (2012), Embedding Maritime Spatial Planning in National Legal Frameworks, *Journal of Environmental Policy & Planning*, 14(1), 7-27

Duxbury, A. (2002), *Fundamentals of oceanography*. 4th ed., McGraw-Hill, New York

EA (2017), *Water Framework Directive assessment: estuarine and coastal waters* [ONLINE] Available at: https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters [last accessed 4 March 2019]

Earle, S., (2009), *The World Is Blue: How Our Fate and the Oceans Are One*, National Geographic. Washington DC

East Kent Mercury (1966), *Building on the Goodwins: Previous Plans for 'Sands' and how they ended*, 1 December 1966

East Kent Mercury (1972), *Goodwin Sands plan could change coastline*, 20 October 1972

East Kent Mercury (1975), *No objection to dredging on Goodwins*, 22 May 1975

Eggermont, H., Balian, E., Azevedo, J., Beumer, V., Brodin, T., Claudet, J., Fady, B., Grube, M., Keune, H., Lamarque, P., Reuter, K., Smith, M., van Ham, C., Weisser, W. & Le Roux, X.(2015), Nature-based Solutions: New Influences for Environmental Management and Research in Europe, *GAIA*, 24(4), 243-248

Ehler, C. (2008), Conclusions: Benefits, lessons learned, and future challenges of marine spatial planning, *Marine Policy*, 32, 840-843

Elden, S. (2004), *Understanding Henri Lefebvre. Theory and the Possible,* Continuum, London

Elden, S., Lebas, E. & Kofman, E (2003), *Henri Lefebvre Key Writing*, Continuum, New York

Elliott, L. (2004), *The Global Politics of the Environment*, Palgrave Macmillan, Basingstoke

Elliott, L., White, M., Grellier, J., Rees, S., Waters, R. & Fleming, L. (2018), Recreational visits to marine and coastal environments in England: Where, what, who, why, and when?, *Marine Policy,* 97, 305-314

Eranti, V. (2017), Re-visiting NIMBY: From conflicting interests to conflicting valuations, *The Sociological Review,* 65(2), 285-301

Ercan, M., (2010), “Less Public that Before? Public Space Improvement in Newcastle City Centre”, in Madanipour, A. (ed), *Whose public space? International Case Studies in Urban Design and Development*, Routledge, London

European Commission (1985), *Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment (EIA Directive)* [ONLINE] Available at: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31985L0337&from=EN [last accessed 2 August 2017]

European Commission (2000), *Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy (Water Framework Directive)* [ONLINE] Available at http://eur-

lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32000L0060&from=EN [last accessed 31 March 2017]

European Commission (2008), *Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)* [ONLINE] Available at http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32008L0056&from=EN [last accessed 30 March 2017]

Evans, L. (2018), *Goodwin Sands 5k Run – Rat Race Project Explore* [ONLINE] Available at: https://theairlandandsea.com/2018/07/goodwin-sands-5k-run-rat-race-project.html [last accessed 2 February 2019]

Evans, S. & Davison, M. (2019), *Wrecks in Coastal and Marine Ecosystems: The Goodwin Sands and Kent Coast, Historic England Research Report Series No. 45/2019* [ONLINE] Available at: https://research.historicengland.org.uk/redirect.aspx?id=7728%7C%20Wrecks%20in%20Coastal%20and%20Marine%20Ecosystems:%20The%20Goodwin%20Sands%20and%20Kent%20Coast [last accessed 5 December 2019]

Finlayson, A. (2009), Planning People: The Ideology and Rationality of New Labour, *Planning, Practice & Research*, 24(1), 11-22

Firth. A. (2015), *The Social and Economic Benefits of Marine and Maritime Cultural Heritage: towards greeter accessibility and effective management. Fjordr Limited for Honor Frost Foundation* [ONLINE] Available at: https://honorfrostfoundation.org/wp-content/uploads/2019/06/HFF-Report_Social-Economic-Value-of-Marine-and-Maritime-Cultural-Heritage.pdf [last accessed 24 January 2020]

Fishing News (2019), *Public Notices* [ONLINE] Available at: https://fishingnews.co.uk/category/publicnotices/ [last accessed 17 December 2019]

Flannery, W. & O Cinneide, M. (2012), A roadmap for marine spatial planning: A critical examination of the European Commission's guiding principles based on their application in the Clyde MSP Pilot Project, *Marine Policy*, 36, 265-271

Flannery, W., Healy, N. & Luna, M. (2018), Exclusion and non-participation in Marine Spatial Planning, *Marine Policy*, 88, 32-40

Fletcher, S., Jefferson, R., Glegg, G., Rodwell, L. & Dodds, W. (2014), England's evolving marine and coastal governance framework, *Marine Policy*, 45, 261-268

Flinders, M. (1999), "Setting the Scene: Quangos in Context", in Flinders, M. & Smith, M. (eds), *Quangos, Accountability and Reform*, Palgrave Macmillan, Basingstoke

Fraser, N. (2018), "The Theory of the Public Sphere: The Structural Transformation of the Public Sphere (1962)" in Brunkhorst, H., Kredide, R. & Lafont, C. (eds), *The Habermas Handbook*, Columbia University Press, New York

Friel, I. (2003), *A maritime history of Britain and Ireland*, British Museum, London

Fritsch, O. & Newig, J. (2012), "Participatory Governance and Sustainability: Findings of a meta-analysis of stakeholder involvement in environmental decision making", in Brousseau, E., Dedeurwaerdere, T., & Siebenhüner, B, (eds), *Reflexive governance for global public goods*, MIT Press, Cambridge, Massachusetts

Fuch, C. (2019), Henri Lefebvre's Theory of the Production of Space and the Critical Theory of Communication, *Communication Theory*, 29, 129-150

Gaffney, V., Thomson, K., Fitch, S., Aggregates Levy Sustainability Fund, & English Heritage. (2007), *Mapping Doggerland: The mesolithic landscapes of the southern North Sea*, Archaeopress, Oxford

Gagnon-Thompson, S. & Barton, M. (1994), Ecocentric and anthropocentric attitudes toward the environment, *Journal of Environmental Psychology*, 14(2), 149-157

Gattie, G. (1904), *Memorials of the Goodwin Sands and their surroundings, legendary and historical,* JJ Keliter & Co Ltd, London

Gazzola, P. & Onyango, V. (2018), Shared values for the marine environment – developing a culture of practice for marine spatial planning, *Journal of Environmental Policy and Planning,* 20(4), 468-481

Gazzola, P., Roe, M. & Cowie, P. (2015), Marine spatial planning and terrestrial spatial planning: reflecting on new agendas, *Environment and Planning C: Government and Policy*, 33, 1156-1172

Gee, K., Kannen, A., Adlam, R., Brooks, C., Chapman, M., Cormier, R., Fischer, C., Fletcher, S., Gubbins, M., Shucksmith, R. & Shellock, R. (2017), Identifying culturally significant areas for marine spatial planning, *Ocean and Coastal Management*, 136(1), 139-147

Gehl, J. (1996(1971)), *Life Between Buildings: Using Public Space (3rd edn)*, Arkitektens Forlag, Skive

Germond, B. & Germond-Duret, C. (2016), Ocean governance and maritime security in a placeful environment: The case of the European Union, *Marine Policy*, 66, 124-131

Gieseking, J. & Mangold, W. (eds) (2014), *The People, Place, and Space Reader*, Routledge, London

Gilliland, P. & Laffoley, D. (2008), Key elements and steps in the process of developing ecosystem-based marine spatial planning, *Marine Policy*, 32, 787-796

Goldman, E. & Swayze, S. (2012), In-depth interviewing with healthcare corporate elites: strategies for entry and engagement, *International Journal of Qualitative Methods*, 11(3), 230-243

González, A., Thérivel, R., Fry, J. & Foley, W. (2015), Advancing practice relating to SEA alternative, Environmental Impact Assessment Review, 53, 52-63

Goode, L. (2005), *Jurgen Habermas: democracy and the public sphere*, Pluto Press, London

Goodsell, C. (2003), The concept of Public Space and its Democratic Manifestations, *The American Review of Public Administration*, 33(4), 361-383

Goodwin Sands Potholing Club (2015), *Aims and Objectives* [ONLINE] Available at: http://www.goodwinsandspotholingclub.co.uk/ [last accessed 2 February 2019]

Goodwin Sands SoS (2018), *Lewis Pugh addresses the Conservative Party Conference* [ONLINE] Available at: https://goodwinsandssos.org/lewis-pugh-addresses-the-conservative-party-conference/ [last accessed 5 February 2019]

Goodwin Sands SoS (2019a), *Goodwin Sands Judicial Review has been dismissed* [ONLINE] Available at: https://goodwinsandssos.org/goodwin-sands-judicial-review-has-been-dismissed/ [last accessed 2 December 2019]

Goodwin Sands SoS (2019b), *Save Our Shipwrecks* [ONLINE] Available at: https://goodwinsandssos.org/save-our-shipwrecks/ [last accessed: 5 December 2019]

Goodwin Sands SoS (2019c), *Save Our Sealife* [ONLINE] Available at: https://goodwinsandssos.org/save-our-sealife/ [last accessed: 6 December 2019]

Gov.uk (2019), *Marine Activity Data* [ONLINE] Available at: mis.marinemanagement.org.uk [last accessed 18 November 2019]

Gray, D., Canessa, R., Rollins, R., Keller, C. & Dearden, P. (2010), Incorporating Recreational Users into Marine Protected Area Planning: A Study of Recreational Boating in British Columbia, Canada, *Environmental Management*, 46, 167-180

Gregory, R. & Keeny, R. (1994), Creating Policy Alternatives Using Stakeholder Values, *Management Science,* 4(8), 1035-1048

Gunningham, N. (2012), "Regulatory Reform and Reflexive Regulation: Beyond Command and Control" in, in Brousseau, E., Dedeurwaerdere, T., & Siebenhüner, B. (eds), *Reflexive governance for global public goods*, MIT Press, Cambridge, Massachusetts

Haggett, C. (2011), Understanding public responses to offshore wind power, *Energy Policy,* 39, 503-510

Hanf, K. & Jansen, A. (1998), "Environmental policy: the outcome of strategic action and institutional characteristics", in Hanf, K. & Jansen (eds), A., *Governance and Environment in Western Europe*, Longman, Harlow

Hardinsty, J. (1990), *The British Seas: An introduction to the oceanography and resources of the north-west European continental shelf*, Routledge London and New York

Harris, R. & Miller, L. (2011) Earth observation and the public good, *Space Policy,* 27, 194-201

Harrison, C., Burgess, J. & Clark, J. (1999) “Capturing Values for Nature: Ecological, Economic and Cultural Perspectives”, in Holder, J. & McGillivary, D. (eds), *Locality and identity: Environmental issues in law and society*, Ashgate, Aldershot

Harvey, W. (2011) Strategies for conducting elite interviews, *Qualitative Research*, 11(4), 431-441

Hastings Canoe Club (2019) 2019 *Goodwin Sands Sea Kayak Trip Report* [ONLINE] Available at: https://www.hastingscanoeclub.org.uk/index.php/recent-trip-reports/332-2019-goodwin-sands-sea-kayak-trip-report [last accessed 9 December 2019]

Hattam, C., Hooper, T. & Papathanasopoulou, E. (2017), A well-being framework for impact evaluation: The case of the UK offshore wind industry, *Marine Planning*, 78, 122-131

Haughton, G. & Counsell, D. (2004), *Regions, Spatial Strategies and Sustainable Development*, Routledge, London

Haughton, G., Allmendinger, P. & Counsell, D. (2010), *The new spatial planning: territorial management with soft spaces and fuzzy boundaries*, Routledge, London and New York

Hayward, P. (2017), Gaming the Tide: The territorialisation of temporarily exposed English sandbanks for social cricket events, *Journal of Marine and Island Cultures*, 6(1), 2212-6821

Healey, P. (2004), “Towards a ‘social democratic’ policy agenda for cities”, in Johnstone, C. & Whitehead M. (eds), *New Horizons in Urban Policy,* Ashgate, Aldersho

Heeps, C. (2005), “The race for offshore renewables: Meeting 2010”, in Smith, H. & Potts, J. (eds), *Managing Britain’s marine and coastal environment: Towards a sustainable future*, Routledge, London

Heinelt, H., Malek, T., Staeck, N. & Toller, A. (2001), “Environmental policy: The European Union and a Paradigm Shift”, in Heinelt, H., Malek, T. & Toller, A. (eds), *European Union environmental policy and new forms of governance: a study of implementation of the environment impact assessment directive and the eco-*

management and audit scheme regulations in the three member states, Ashgate, Burlington VT

Hillier, J. (2010), “Introduction” in, Hillier. J, & Healey. P, (eds), *The Ashgate Research Companion to Planning Theory*, Ashgate, Farnham

Hillier, J. (2001), “Imagined Value: The Poetics and Politics of Place”, in Madanipour, A., Hull, A. & Healey, P (eds), *The Governance of Place: Space and Planning Processes*, Ashgate, Aldershot

HM Government (1994), *The Conservation (Natural Habitats, &c.) Regulations 1994* [ONLINE] Available at: http://www.legislation.gov.uk/uksi/1994/2716/contents/made [accessed 27 November 2019]

HM Government (2008a), *Draft Marine Bill - Policy Paper*, HMSO, London

HM Government (2008b), *Draft Marine Bill - Draft Marine Bill*, HMSO, London

HM Government (2008c), *Draft Marine Bill – Impact Assessment*, HMSO, London

HM Government (2008d), *Joint Committee on the Draft Marine Bill: Volume 1 Report and formal minutes*, HMSO, London

HM Government (2008e), J*oint Committee on the Draft Marine Bill Volume 2 Oral and written evidence*, HMSO, London

HM Government (2008g), *Taking forward the marine Bill: The Government response to pre-legislative scrutiny and public consultation*, HMSO, London

HM Government (2009a), *Marine and Coastal Access Act 2009*, HMSO, London

HM Government (2009b), *Marine and Coastal Access Act 2009 Explanatory Notes*, HMSO, London

HM Government (2010), *Draft UK MPS Considered in Grand Committee – debate transcript* [ONLINE] Available at: http://hansard.parliament.uk/Lords/2010-12-15/debates/10121531000047/DraftUnitedKingdomMarinePolicyStatement [last accessed 14 February 2018]

HM Government (2011a), *House of Commons, environment, Food and Rural Affairs Committee: The Marine Policy Statement: Second Report of Session 2010-11 Report*, together with formal minutes, oral and written evidence, HMSO, London

HM Government (2011b), *UK Marine Policy Statement* [ONLINE] Available at: https://www.gov.uk/government/publications/uk-marine-policy-statement [last accessed 3 April 2017]

HM Government (2011c), *Marine Licensing (Delegation of Functions) Order 2011*, HMSO, London

HM Government (2011d), *UK Marine Policy Statement: Summary of Differences between the draft and final UK Marine Policy Statement*, HMSO, London

HM Government (2011e), *UK Marine Policy Statement: Post Adoption Statement*, HMSO, London

HM Government (2011f), *Secretary of State for environment, Food and Rural Affairs' Statement in Response to the environment, Food and Rural Affairs Committee's Recommendations on the Marine Policy Statement*, HMSO, London

HM Government (2011g), *Marine Licensing (Exempted Activities) Order 2011*, HMSO, London

HM Government (2011h), *The Localism Act 2011*, HMSO, London

HM Government (2013a), *Her Majesty's Government and the Marine Management Organisation Framework Document 2012 (amended July 2013)*, HMSO, London

HM Government (2013b*), Marine Licensing (Exempted Activities) Order 2013*, HMSO, London

HM Government (2015), *Marine Licensing (Delegation of Functions) (Amendment) Order 2015*, HMSO, London

HM Government (2016), *Marine planning in England* (ONLINE) Available at: https://www.gov.uk/government/collections/marine-planning-in-england [last accessed 27 November 2019]

HM Government (2017a), *Rights of Way and Accessing Land* (ONLINE) Available at: https://www.gov.uk/right-of-way-open-access-land/use-your-right-to-roam [last accessed 10 May 2017]

HM Government (2017b), *The Marine Works (Environmental Impact Assessment) (Amended) Regulations 2017*, HMSO, London

Hodgson, G. (1903), *The Borough of South Shields*, Andrew Reed & Company, Newcastle-upon-Tyne

Hogwood, B (1995), “The ‘Growth’ of Quangos: Evidence and Explanations”, in Ridley, F. & Wilson, D. (eds), *The Quango Debate*, Oxford University Press, Oxford

Holgerson, S. (2014), Spatial planning as condensation of social relations: A dialectical approach, *Planning Theory*, 14(1), 5-22

Hollway, W. & Jerrson, T. (2000), *Doing qualitative research differently: free association, narrative and the interview method*, Sage Publishing, London

Holyoak, G. (2008), *Deal: All in the Downs*, S. B. Publications, Deal

Home Office (2018), *Home Secretary bolsters Border Force fleet in the Channel* [ONLINE] Available at: https://www.gov.uk/government/news/home-secretary-bolsters-border-force-fleet-in-the-channel [last accessed 5 February 2019]

Hooper, T. & Austen, M. (2013), Tidal barrages in the UK: Ecological and social impacts, potential mitigation, and tools to support barrage planning, *Renewable and Sustainable Energy Reviews*, 23, 289-298

Hooper, T., Hattam, C. & Austen, M. (2017), Recreational use of offshore wind farms: Experiences and opinions of sea anglers in the UK, *Marine Policy*, 78, 55-60

Hughes, J. (2000), *Ecology and Historical Materialism,* Cambridge University Press, Cambridge

Hull, A. (2013), Managing Competition for Marine Space Using the Tools of Planning in the UK, *Planning, Practice & Research*, 28(5), 503-526

Hull, S., Dickie, I., Tinch, R. & Saunders, J. (2014), Issues and challenges in spatio-temporal application of an ecosystem services framework to UK seas, *Marine Policy,* 45, 359-397

IMO (1972), *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other matter*s [ONLINE] Available at http://www.imo.org/en/OurWork/Environment/LCLP/Documents/LC1972.pdf [last accessed 30 March 2017]

IMO (1973), *International Convention for the Prevention of Pollution from Ships (MARPOL)*, [ONLINE] Available at http://www.mar.ist.utl.pt/mventura/Projecto-Navios-I/IMO-Conventions%20(copies)/MARPOL.pdf [last accessed 30 march 2017]

Innes, J. & Booher, D. (2015), A turning point for planning theory? Overcoming dividing discourses, *Planning Theory*, 14(2), 195-213

International Churchill Society (2019), *The Few* [ONLINE] Available at: https://winstonchurchill.org/resources/speeches/1940-the-finest-hour/the-few/ [last accessed 3 December 2019]

Isle of Thanet News (2019), *A 5k run has taken place on the disappearing Goodwin Sands* [ONLINE] Available at: https://theisleofthanetnews.com/2019/06/17/a-5k-run-has-taken-place-on-the-disappearing-goodwin-sands/ [last accessed: 5 December 2019]

Iveson, K. (2014(1998)), "Putting the Public Back into Public Space", in Gieseking, J. & Mangold, W. (eds), *The People, Place, and Space Reader*, Routledge, London

IWCO (1998), *The Ocean – Our Future*, Cambridge University Press, Cambridge

Jackson, J. (1984), The American Public Space, *The Public Interest*, 74, 52

Janzen, R. (2008), Reconsidering the Politics of Nature: Henri Lefebvre and The Production of Space, *Capitalism Nature Socialism*, 13(2), 96-116

Jasanoff, S. (2004), "Heaven and Earth: The Politics of Environmental Images" in Jasanoff, S. & Long Martello, M. (eds), *Earthly Politics: Local and Global in Environmental Governance*, The MIT Press, Cambridge, Massachusetts

Jay, S. (2010), Build at sea: Marine management and the construction of marine spatial planning, *Town Planning Review,* 81(2), 173-192

Jay, S. (2011), Mobilising for marine wind energy in the United Kingdom, *Energy Policy*, 39, 4125-4133

Jay, S. (2012), Marine Space: Manoeuvring Towards a Relational Understanding, *Journal of Environmental Policy & Planning,* 14(1), 81-96

Jay, S. (2018), The shifting sea: from soft space to lively space, *Environmental Policy and Planning*, 20(4), 450-467

Jay, S., Klenke, T. & Jansen, H (2016), Consensus and variance in the ecosystem approach to marine spatial planning: German perspectives and multi-actor implications, *Land Use Policy*, 54, 129-138

Jentoft, S. & Chuenpagdee, R. (2009), Fisheries and coastal governance as a wicked problem, *Marine Policy*, 33, 553-560

Jobstvogt, N., Watson, V. & Kenter, J. (2014), Looking below the surface: The cultural ecosystem service values of UK marine protected areas (MPAs), *Ecosystem Services*, 10, 97-110

Johnson, E (2015), EIA: A splintering, exploding discipline with a massive new constituency, Environmental Impact Assessment Review, 51, A1-A2

Jones, C. (1978), Marine archaeology in the UK, *Marine Policy, 2*(4), 321-330

Jones, P. (2014), *Governing Marine Protected areas: Resilience through diversity*, Earthscan from Routledge, London

Jones, P. (2006), The Marine Bill: Cornucopia or Pandora's box? *ECOS: A Review of Conservation*, 27(2), 1-6

Jones, P. (2012), Marine protected areas in the UK: challenges in combining top-down and bottom-up approaches to governance, *Environmental Conservation*, 39(3), 248-258

Jones, P., Lieberknecht, L. & Qiu, W. (2016), Marine spatial planning in reality: Introduction to case studies and discussion of findings, *Marine Policy*, 71, 256-264

Juntti, M., Russel, D. & Turnpenny, J. (2009), Evidence, politics and power in public policy for the environment, *Environmental Scientific Policy*, 12, 207-215

Kaiser, M. & Williams, P. (2011), *Marine ecology: processes, systems, and impacts 2nd ed.*, Oxford University Press, Oxford and New York

Kanie, N. & Hass, P. (2004), *Emerging Forces in Environmental Governance*, United Nations University Press, Tokyo

Karleskint, G. (1998), *Introduction to marine biology*, Saunders College Publishing, Philadelphia

Karpiak, C. & Baril, G. (2008), Moral reasoning and concern for the environmental, *Journal of Environmental Psychology,* 28, 203-208

Keller, D. (2010), *Environmental Ethics: the big questions*, Wiley-Blackwell, Chichester

Kelly, C. (2018), 'I Need the Sea and the Sea Needs Me': Symbiotic coastal policy narratives for human wellbeing and sustainability in the UK, *Marine Policy*, 97, 223-231

Kent County Council (2013), *Dover District Heritage Strategy*, [ONLINE] Available at: https://www.dover.gov.uk/Planning/Conservation/Heritage-Strategy.aspx [last accessed 2 February]

Kent Online (2019), *Team of six achieve swim to Goodwin Sands*, Deal, starting from Ramsgate [ONLINE] Available at: https://www.kentONLINE.co.uk/dover/news/historic-swim-to-shifting-sands-211648/ ([last accessed 9 December 2019]

Kern, F., Smith, A., Shaw, C., Raven, R. & Verhees, B. (2014), From laggard to leader: Explaining offshore wind development in the UK, *Energy Policy,* 69, 635-646

Kezar A (2003), Transformational elite interviews: principles and problems, *Qualitative Inquiry*, 9(3), 395-415

Kidd, S., Plater, A., Frid, C. (eds) (2011), *The Ecosystem Approach to Marine Planning and Management,* London, Earthscan,

Kidd, S. & Ellis, G. (2012), From the Land to Sea and Back Again? Using Terrestrial Planning to Understand the Process of Marine Spatial Planning*, Journal of Environmental Policy & Planning*, 14(1), 49-66

Kidd, S. & Shaw, D. (2013), Reconceptualising territoriality and spatial planning: insights from the sea, *Planning Theory & Practice*, 14(2), 180-197

King, R. (2010), "How to Construe Nature: Environmental Ethics and the Interpretation of Nature", in Keller, D. (ed), *Environmental Ethics: the big questions*, Wiley-Blackwell, Chichester

Kirby, D. & Hinkkanen-Lievonen, M. (2000), *The Baltic and the North seas (Seas in history)*, Routledge, New York

Kirkfeldt, T. (2019), An ocean of concepts: Why choosing between ecosystem-based management, ecosystem-based approach and ecosystem approach makes a difference, *Marine Policy*, 106, 1-11

Klain, S. & Chan, K. (2012), Navigating coastal values: Participatory mapping of ecosystem services for spatial planning, *Ecological Economics,* 82, 104-113

Klosterman, R. (1985), Arguments for and against Planning, *The Town Planning Review*, 56(1), 5-20

Kohn, M. (2004), *Brave New Neighbourhoods: The Privatisation of Public Space*, Routledge, London

Kortenkamp, K. & Moore, C. (2001), Ecocentrism and Anthropocentrism: Moral Reasoning About Ecological Commons Dilemmas, *Journal of Environmental Psychology,* 21, 261-272

Kvale, S. (1996), *InterViews: An Introduction to Qualitative Research Interviewing*, Sage Publishing, London

Ladenberg, J. (2010), Attitudes towards offshore wind farms – The role of beach visits on attitudes and demographic and attitude relations, *Energy Policy,* 38, 1297-1304

Laker, J. (1921), *History of Deal 2nd Edition*, T F Pain & Sons, Deal

Landscape Institute & IEMA (2013), *Guidelines for Landscape and Visual Impact Assessment Third edition*, Routledge, Abingdon

Laurila-Pant, M., Lehikoinen, A., Uusitalo, L. & Venesjärvi, R. (2015), How to value biodiversity in environmental management? *Ecological Indicators, 55*, 1-11

Lawson, B. (2001), *The Language of Space*, Architectural Press, Oxford

Lee, M. (2017), Winner of the SLS Annual Conference Best Paper Prize 2016: Knowledge and landscape in wind energy planning, *Legal Studies,* 37(1), 3-24

Lefebvre, H. (1991), *The Production of Space*, Oxford University Press, Oxford

Lessig, L. (2002), *The Future of Ideas: The Fate of The Commons in a Connected World*, Vintage Books, New York

Pugh, L. (2019), *The Long Swim* [ONLINE] Available at: http://lewispugh.com/the-long-swim/ [last accessed 15 February 2019]

Littig, B. (2009), "Interview the Elite – Interviewing the Experts: Is There a Difference?", in Bogner, A., Littig, B. & Menz, W. (eds), *Interviewing Experts*, Palgrave, Basingstoke

Local Government Lawyer (2019), *Marine Management Organisation defeats judicial review over permission for dredging off Kent coast* [ONLINE] Available at: https://www.localgovernmentlawyer.co.uk/planning/401-planning-news/41426-marine-management-organisation-defeats-judicial-review-over-permission-for-dredging-off-kent-coast [last accessed 2 December 2019]

Loftland, L. (1998), *The Public Realm: Exploring the City's Quintessential Social Territory*, Transaction Publishers, New Brunswick

Low, S. & Smith, J. (eds) (2006), *The Politics of Public Space*, Routledge, Abingdon

Low, S. (2013), "Public Space and Diversity: Distributive, procedural and Interactional Justice for Parks" in Young, G. & Stevenson, D. (eds), *The Ashgate Research Companion to Planning and Culture*, Ashgate, Farnham.

Madanipour, A. (2003), *Public and Private Spaces of the City*, Routledge, New York

Madanipour, A. (2010), "Introduction" in Madanipour, A. (ed), *Whose public space? International Case Studies in Urban Design and Development*, Routledge, London

Madanipour, A., Hull, A. & Healey, P (eds) (2001), *The Governance of Place: Space and Planning Processes*, Ashgate, Aldershot

Maes, F. (2008), The international legal framework for marine spatial planning, *Marine Policy*, 32, 797-810

Maes, J. & Jacobs, S. (2015), Nature-Based Solutions for Europe's Sustainable Development, *Conservation Letters A Journal of the Society for Conservation Biology*, 10(1), 1221-124

Malm, A. & Hornborg, A. (2014), The geology of mankind? A critique of the Anthropocene narrative, *The Anthropocene Review*, 1(1), 62-69

Mansfield, B. (2004), Neoliberalism in the oceans: ‘‘rationalization’,’ property rights, and the commons question, *Geoforum*, 35, 313-326

Marcucci, D., Brinkley, J. & Jordan, L. (2012), A Case for Coastal Theory with Lessons from Planning Theory, *Coastal Management,* 40(4), 401-420

Marston, G. (1991), The Crown's seabed estate – a valuable prerogative. *Cambridge Law Journal*, 50(3), 384-386

Massey, D. (2005), *For Space*, SAGE, London

Mayfield, B. (2009), Troubled Waters: The Unifying Influence of Conservation and Public Health on the Access Provisions of the Marine and Coastal Access Act, *Liverpool Law Review,* 30, 247-262

MBA (ND), *Crab Watch* [ONLINE] Available at: https://www.mba.ac.uk/crabwatch/ [last accessed 5 February 2019]

McBreen, F., Askew, N., Cameron, A., Connor, D., Ellwood, H. & Carter, A. (2011), *UKSeaMap 2010: Predictive mapping of seabed habitats in UK waters. JNCC Report, No. 446* [ONLINE] Available at: http://archive.jncc.gov.uk/PDF/jncc446_web.pdf [last accessed 24 January 2020]

McCartney, A. (2006), The Social Value of Seascapes in the Jurien Bay Marine Park: An Assessment of Positive and Negative Preferences for Change, *Journal of Agricultural Economics,* 57(3), 577-594

McKay, S., Murray, M. & Macintyre, S. (2012), Justice as Fairness in Planning Policy-Making, *International Planning Studies,* 17(2), 147-162

McLachlan, C. (2009), ‘You don’t do a chemistry experiment in your best china’: Symbolic interpretations of place and technology in a wave energy case, *Energy Policy,* 37, 5342-5350

Mee, L., Cooper, P., Kannen, A., Gilbert, A. & O'Higgins, T. (2015), Sustaining Europe's seas as coupled social-ecological systems, *Ecology and Society, 20*(1), 1-10

Merrifield, A. (2000) ,“Henri Lefebvre: a socialist in space” in Crang, M. & Thrift, N. (eds), *Thinking Space*, Routledge, New York

Merrifield, A. (2006), *Henri Lefebvre: A Critical Introduction*, Routledge, New York

Metcalfe, D. (2014), “The history of government transparency”, in Ala’I, P. & Vaughn, R (eds), *Research Handbook on Transparency*, Edward Elgar, Cheltenham

MHCLG (2018), *National Planning Policy Framework*, HMSO, London

Midgely, M. (2003), *The Myths we Live by*, Routledge, London

Mikecz, R. (2012), Interviewing elites: addressing methodological issues, *Qualitative Inquiry*, 18(6), 482-493

Miller, D. (1999), “Social Justice and Environmental Goods” in Dobson, A. (ed), *Fairness & Futurity: Essays on Environmental Sustainability and Social Justice*, Oxford University Press, Oxford

Miller, L. & Keith, D. (2018), Climatic Impacts of Wind Power, *Joule*, 2(12), 2618-2632

Mitchell, D. (2003), *The Right to the City: Social justice and the Fight for Public Space*, Guildford Press, New York

MMO (2014a), *Marine licensing and government better regulation objectives annual assessment* [ONLINE] Available at: https://www.gov.uk/government/publications/marine-licensing-and-better-regulation [last accessed 4 March 2019]

MMO (2014b), *Generating energy offshore* [ONLINE] Available at: https://www.gov.uk/guidance/generating-energy-offshore [last accessed 4 March 2019]

MMO (2017), *Marine Licence Review: A report produced for the Marine Management Organisation MMO Project No: 1126* [ONLINE] Available at: https://www.gov.uk/government/publications/marine-licence-review-mmo-1126 [last accessed 4 March 2019]

MMO (2018a), *Make a marine licence application* [ONLINE] Available at: https://www.gov.uk/guidance/make-a-marine-licence-application [last accessed 4 March 2019]

MMO (2018b), *Do I need a marine licence?* [ONLINE] Available at: https://www.gov.uk/guidance/do-i-need-a-marine-licence [last accessed 1 March 2019]

MMO (2018c), *Marine Licensing: impact assessment* [ONLINE] Available at: https://www.gov.uk/guidance/marine-licensing-impact-assessments [last accessed 4 march 2019]

MMO (2018d), *The marine licence application timeline* [ONLINE] Available at: https://www.gov.uk/guidance/the-marine-licence-application-timeline [last accessed 4 march 2019]

MMO (2018e), *Marine Licensing Exempted Activities* [ONLINE] Available at: https://www.gov.uk/government/publications/marine-licensing-exempted-activities/marine-licensing-exempted-activities [last accessed 4 March 2019]

MMO (2018f), *Apply for a harbour order* [ONLINE] Available at: https://www.gov.uk/guidance/apply-for-a-harbour-order [last accessed 4 March 2019]

MMO (2018g), *Seascape Character Assessment for the South East Inshore marine plan area. A report produced for the Marine Management Organisation*, MMO Project No: MMO1134, September 2018

MMO (2018i), *Self Service Marine Licensing* [ONLINE] Available at: https://www.gov.uk/government/publications/self-service-marine-licensing [last accessed 11 December 2019]

MMO (2019a), *Marine Licence Public Register* [ONLINE] Available at: https://www.gov.uk/check-marine-licence-register [last accessed 18 November 2019]

MMO (2019b), *Marine Licensing Selected Cases* [ONLINE] Available at: https://www.gov.uk/government/collections/marine-licensing-selected-cases [last accessed 18 November 2019]

MMO (2019c), *Marine Licence Fees* [ONLINE] Available at: https://www.gov.uk/government/publications/marine-licensing-fees/marine-licensing-fees [last accessed 4 March 2019]

MMO (2020), *Contact Us* [ONLINE] Available at: https://www.gov.uk/government/organisations/marine-management-organisation#org-contacts [last accessed 17 February 2020]

Moore, J. (2014), The End of Cheap Nature. Or How I Learned to Stop Worrying about "The" Environment and Love the Crisis of Capitalism, in Suter, C. & Chase-Dunn, C. (eds), *Structures of the World Political Economy and the Future of Global Conflict and Cooperation*, Lit Verlag, Zurich

Moore, J. (2017), The Capitalocene, Part I: on the nature and origins of our ecological crisis, *The Journal of Peasant Studies,* 44:3, 594-630

Moore, J. (ed) (2016), *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism*, PM Press, Oakland CA

Morris, P. & Therivel, R. (2009), *Methods of environmental impact assessment*, Routledge, London

Morton, T. (2010), *The Ecological Thought*, Harvard University Press, Cambridge Massachusetts

Morton, T. (2016), *Dark Ecology*, Columbia University Press, New York

Munro, J., Pearce, J., Brown, G., Kobryn, H. & Moore, S. (2017), Identifying 'public values' for marine and coastal planning: Are residents and non-residents really so different?, *Ocean & Coastal Management,* 148, 9-21

Nanz, P. (2018), "Public Sphere" in Brunkhorst, H., Kredide, R. & Lafont, C. (eds), *The Habermas Handbook*, Columbia University Press, New York

National Research Council Committee on Assessing Valuing the Services of Aquatic Related Terrestrial Ecosystems (2005), *Valuing Ecosystem Services: Toward better environmental decision-making*, National Academies Press, Washington

Natural England (2018), *Sites of special scientific interest: managing your land* [ONLINE] Available at: https://www.gov.uk/guidance/protected-areas-sites-of-special-scientific-interest#get-consent-to-carry-out-operations [last accessed 4 March 2019]

NBNaltas (2019), *National Biodiversity Network Atlas* [ONLINE] Available at: https://nbnatlas.org/ [last accessed 12 January 2020]

NCL (2019), *Ethics Forms and Processes* [ONLINE] Available at: https://www.ncl.ac.uk/research/researchgovernance/ethics/process/ [last accessed 20 November 2019]

Neal, S. and McLaughlin, E. (2009), Researching Up? Interviews, Emotionality and Policy-Making Elites, *Journal of Social Policy*, 38(4), 689-707

Neal, Z. (2010), "Locating Public Space", in Orun, A. & Neal, Z (eds), *Common Ground? Readings and Reflections on Public Space*, Routledge, London

Nemeth, J. (2012), Controlling the Commons: How Public Is Public Space?, *Urban Affairs Review,* 48(6), 811-835

Nesshover, C., Assmuth, T., Irvine, K., Rusch, G., Waylen, K. Delbaere, B., Hasse, D., Jones-Walters, L., Keune, H., Kovacs, E., Krauze, K., Kulvik, M., Rey, F., van Dijk, J., Vistad, O., Wilkinson, M. & Wittmer, H. (2017), The science, policy and practice of nature-based solutions: An interdisciplinary perspective, *Science of the Total Environment*, 579, 1215-1227

Newell, R. & Woodcock, T. (eds.) (2013), *Aggregate Dredging and the Marine Environment: an overview of recent research and current industry practice* [ONLINE] Available at: https://www.thecrownestate.co.uk/media/5711/aggregate-dredging-and-the-marine-environment.pdf [last accessed 23 January 2017]

Newman, P (2009), Markets, experts and depoliticizing decisions on major infrastructure, *Urban Research & Practice*, 2(2), 158-168

Nimmo, F., Cappell, R., Huntington, T. & Grant, A. (2011), Does fish farming impact on tourism in Scotland?, *Aquaculture Research,* 42, 132-141

North York Moors (2017), *Rights of Way and Open Access* [ONLINE] Available at: http://www.northyorkmoors.org.uk/visiting/enjoy-outdoors/walking/rights-of-way-and-open-access) [last accessed 10 May 2017]

Norton, B. (2017), A Situational Understanding of Environmental Values and Evaluation, *Ecological Economics,* 138, 242-248

O'Neil, J., Holland, A. & Light, A. (2008), *Environmental Values*, Routledge, Abingdon

OGA (2018), *OGA-UKCS Designations* [ONLINE] Available at: https://data.gov.uk/dataset/98385854-4ae4-41ef-b80b-ee1c7d16b241/oga-ukcs-designations [last accessed 24 January 2020]

Orun, A. & Neal, Z. (2010), *Common Ground? Readings and Reflections on Public Space*, Routledge, New York

OSPAR (1992/2007), *Convention for the protection of the marine environment of the North-East Atlantic* [ONLINE] Available at: http://www.ospar.org/site/assets/files/1290/ospar_convention_e_updated_text_in_2007_no_revs.pdf [last accessed 23 January 2017]

Paddison, R. (2013), "Public Spaces: On their production and consumption" in Young, G. & Stevenson, D. (eds), *The Ashgate Research Companion to Planning and Culture*, Ashgate, Farnham

Papageorgiou, M. (2018), Underwater cultural heritage facing maritime spatial planning: Legislative and technical issues, *Ocean and Coastal Management*, 165, 195-202

Parkinson, J. (2012), How is space public? Implications for spatial policy and democracy, *Environment and Planning C: Government and Policy*, 31, 682–699

Parkinson, J. (2012a), *Democracy and Public Space: The Physical Sites of Democratic Performance*, Oxford University Press, Oxford

Pater, C. & Oxley, I. (2014), Developing marine historic environment management policy: The English Heritage experience, *Marine Policy*, 45, 342-348

Peel, D. & Lloyd, G. (2004), The social reconstruction of the marine environment: Towards marine spatial planning?, *Town Planning Review,* 75(3), 359-378

Peters, K. & Steinberg, P. (2019), The ocean in excess: Towards a more-than-wet ontology, *Dialogues in Human Geography*, 90(3), 293-307

Pinarbasi, K., Galparsoro, I., Borja, A., Stelzenmuller, V., Ehler, C. & Gimpel, A. (2017), Decision support tools in marine spatial planning: Present applications, gaps and future perspectives, *Marine Policy,* 83, 83-91

Pinet, P. (2016), *Invitation to oceanography*. Seventh edition, Jones & Bartlett Learning, Burlington, Massachusetts

Plasman, C. (2008), Implementing marine spatial planning: A policy perspective, *Marine Policy,* 32, 811-815

Plieninger, T., Dijks, S., Oteros-Rozas, E. & Bieling, C. (2013), Assessing mapping, and quantifying cultural ecosystem services at community level, *Land Use Policy,* 33, 118-129

Pomeroy, R. & Douvere, F. (2008), The engagement of stakeholder in the marine spatial planning process, *Marine Policy,* 32, 816-822

Port of Dover (2016*), Dover Western Docks Revival – Goodwin Sands June 2016: Marine Licence Application* [ONLINE] Available at: https://www.doverport.co.uk/DWDR [last accessed 3 December 2019]

Port of Dover (2017a), *Dover Western Docks Revival Newsletter Spring 2017* [ONLINE] Available at: https://www.doverport.co.uk/DWDR [last accessed 3 December 2019]

Port of Dover (2017b), *Dover Western Docks Revival Newsletter Summer 2017* [ONLINE] Available at: https://www.doverport.co.uk/DWDR [last accessed 3 December 2019]

Portney, E. (1991), “Public Environmental Policy Decision Making: Citizen Roles”, in Chechile, R. & Carlisle, S. (eds), *Environmental Decision Making: A Multidisciplinary Perspective*, Van Nostrand Reinhold, New York

Potts, T., Burdon, D., Jackson, E., Atkins, J., Saunders, J., Hastings, E. & Langmead, O. (2014), Do marine protected areas deliver flows of ecosystem services to support human welfare? *Marine Policy, 44*, 139-148

Potts, T., O’Higgins, T. & Hastings, E. (2012), Oceans of opportunity or rough seas? What does the future hold for developments in European marine policy?, *Philosophical Transactions of the Royal Society A,* 370, 5682-5700

Potts, T., Pita, C., O'Higgins, T. & Mee, L., (2016), Who cares? European attitudes towards marine and coastal environments, *Marine Policy*, 72, 59-66

Probyn, E. (2016), *Eating the Ocean*, Duke University Press, Durham

Pugh, J. (2016), The relational turn in island geographies: bringing together island, sea and ship relations and the case of the Landship, *Social & Cultural Geography*, 17(8), 1040-1059

Purdy, J. (2015), *After Nature: A Politics for the Anthropocene*, Harvard University Press, Cambridge, Massachusetts

Pyne, S. (2015), *The Fire Age*, Aeon [ONLINE] Available at: https://aeon.co/essays/how-humans-made-fire-and-fire-made-us-human [last accessed 24 January 2020]

Rawls, J. (1971), *A Theory of Justice*, Harvard University Press, Cambridge, Massachusetts

Rees, S., Attrill, M., Austen, M., Mangi, S., Richards, J., & Rodwell, L. (2010), Is there a win-win scenario for marine nature conservation? A case study of Lyme Bay, England, *Ocean & Coastal Management, 53*(3), 135-145

Ritchie, H. & Ellis, G. (2010), 'A system that works for the sea'? Exploring Stakeholder Engagement in Marine Spatial Planning, *Journal of Environmental Planning and Management*, 53(6), 701-723

Ritchie, H. (2014), Understanding emerging discourses of Marine Spatial Planning in the UK, *Land Use Policy*, 38, 666-675

Rittel, H. & Webber, M. (1973), Dilemmas in a General Theory of Planning, *Policy Science*, 4, 155-169

Rivero, S. & Villasante, S. (2016), What are the research priorities for marine ecosystem services?, *Marine Policy,* 66, 104-113

Royal Collection Trust (2019), *William Powell Frith (1819-1909) Ramsgate Sands (Life at the Seaside)* [ONLINE] Available at: https://www.rct.uk/collection/405068/ramsgate-sands-life-at-the-seaside [last accessed 24 January 2020]

Royal Courts of Justice (2019), *Case No: CO/4319/2018 Joanna Thomson v Marine Management Organisation Approved Judgement*

Rubin, H. & Rubin, I. (1995), *Qualitative Interviewing: The Art of Hearing Data*, Sage Publishing, London

Rumson, A. & Hallet, S. (2018), Opening up the coast, *Ocean and Coastal Management,* 160, 133-145

Rydehover (2019), *Photostream* [ONLINE] Available at: https://www.flickr.com/photos/rydehover/with/14945729103/ [last accessed 2 February 2019]

Sabot, E (1999), Dr Jekyl, Mr H(i)de: the contrasting face of elites at interview, *Geoforum*, 30, 329-335

Saengsupavanich, C. (2012), Detached breakwaters: Communities' preferences for sustainable coastal protection, *Journal of Environmental Management,* 115, 106-113

Sagoff, M. (1998), Aggregation and deliberation in valuing environmental public goods: A look beyond contingent pricing, *Ecological Economics,* 24, 213-230

Sagoff, M. (2010), "Environmental Ethics and Ecological Science", in Keller, D. (ed), *Environmental Ethics: the big questions*, Wiley-Blackwell, Chichester

Scarff, G., Fitzsimmons, C. & Gray, T. (2015), The new mode of marine planning in the UK: Aspirations and challenges, *Marine Policy,* 51, 96-102

Schacter, D. (1999), The Seven Sins of Memory: Insight From Psycholody and Cognitive Neuroscience, *American Psychologist*, March 1999

Scharrer, L., Stadtler, M. & Bromme, R. (2014), You'd Better Ask an Expert: Mitigating the Comprehensibility Effect on Laypeople's Decisions About Science-Based Knowledge Claims, *Applied Cognitive Psychology*, 28, 461-471

Schiller A., Davison, P. DiGiacomo, P. and Wilmer-Becker, K. (2016), Better Informed Marine Operations and Management: Multidisciplinary Efforts in Ocean Forecasting Research for Socioeconomic Benefit*, American Meteorological Society,* 97, 1553–1559

Schliephack, J. & Dickinson, J. (2017), Tourists' representations of coastal managed realignment as a climate change adaptation strategy, *Tourism Management*, 59, 182-192

Schmid, C. (2008), "Henri Lefebrvre's Theory of The Production of Space", in Lefebvre, H. & Goonewardena, K., *Space, Difference, Everyday Life : Reading Henri Lefebvre*. New York: Routledge

Scottish Government (2019), *National Marine Plan Online (NMPo)* [ONLINE] Available at: https://www2.gov.scot/Topics/marine/seamanagement/national [last accessed 27 November 2019]

Scruton, R. (1984), "Public Space and the Classical Vernacular", in Glazer, N. & Lilla, M. (eds), *The Public Face of Architecture: Civic Culture and Public Spaces*, The Free Press, New York

Seip, K. & Wenstop, F. (2006), *A primer of Environmental Decision-making: An integrative quantitative approach*, Springer, Dordrecht

Shark Trust (ND), *The Great Eggcase Hunt Project* [ONLINE] Available at: https://www.sharktrust.org/en/GEH_the_project [last accessed 5 February 2019]

Shields, R. (2001), "Henri Lefebvre", in Turner, B. & Elliott, A. (eds), *Profiles in contemporary social theory*, Sage, London

Shucksmith, R., Gray, L., Kelly, C. & Tweddle, J. (2014), Regional marine spatial planning – The data collection and mapping process, *Marine Policy*, 50, 1-9

Smith, G. & Brennan, R. (2012), Losing our way with mapping: Thinking critically about marine spatial planning is Scotland, *Ocean and Coastal* Management, 69, 210-216

Smith, H. & Potts, J. (2005), *Managing Britain's marine and coastal environment: Towards a sustainable future*, Routledge, London

Smith, H., Ballinger, R. & Stojanovic, T. (2012), The Spatial Development Basis of Marine Spatial Planning in the United Kingdom, *Journal of Environmental Policy & Planning*, 14(1), 29-47

Smith, J. & Low, S. (2006), “Introduction: The Imperative of Public Space”, in Low, S. & Smith, J. (eds), *The Politics of Public Space*, Routledge, Abingdon

Smith, K. (2006), Problematising power relations in ‘elite’ interviews, *Geoforum*, 37, 643-653

Smythe, T. (2017), Marine spatial planning as a tool for regional ocean governance? An analysis of the New England ocean planning network, *Ocean and Coastal Management*, 135, 11-24

Sohlosberg, D. (2003), “The Justice of Environmental Justice: Reconciling Equity, Recognition, and Participation in a Political Movement” in Light, A. & De-Shalit, A. (eds), *Moral and Political Reasoning in Environmental Practice*, MIT Press, Cambridge Mass.

Soule, M. (2010), “What is Conservation Biology?” in Keller, D. (ed), *Environmental Ethics: the big questions*, Wiley-Blackwell, Chichester

Speth, J. & Hass, P (2006), *Global Environmental Governance*, Island Press, Washington DC

Staeheli, L. & Mitchell D. (2008), *The People’s Property? Power, Politics, and the Public*, Cornell University Press, Ithaca

Steffen, W., Grinevald, J., Crutzen, P. & McNeill, J. (2011), The Anthropocene: conceptual and historical perspectives, *Philosophical Transactions: Mathematical, Physical and Engineering Sciences,* 369 (No 1938, The Anthropocene: a new epoch b

Stickland-Munro, J., Kobryn, H., Brown, G. & Moore, S. (2016), Marine spatial planning for the future: Using Public Participation GIS (PPGIS) to inform the human dimension for large marine parks, *Marine Policy*, 73, 15-26

Stokes, C., Beaumont, E., Russell, P. & Greaves, D. (2014), Anticipated coastal impacts: What water-users think of marine renewables and why, *Ocean & Coastal Management,* 99, 63-71

Swanborn, P. (2010*), Case Study Research: What, Why and How?*, Sage, London

Swyngedouw, E. (2010), “Trouble with Nature: ‘Ecology as the New Opium for the Masses’” in, Hillier, J. & Healey, P. (eds), *The Ashgate Research Companion to Planning Theory*, Ashgate, Farnham

Tafon, R. (2017), Taking power to the sea: Towards a post-structuralist discourse theoretical critique of marine spatial planning, *Environment and Planning C: Politics and Space,* Vol. 36(2), 258-273

Tengberg, A., Fredholm, S., Eliasson, I., Knez, I., Saltzman, K. & Wetterberg, O. (2012), Cultural ecosystem services provided by landscapes: Assessment of heritage values and identity, *Ecosystem Services,* 2, 14-26

Terkildsen, N., Schnell, F. & Ling, C. (2017), Interest Groups, the Media, and Policy Debate Formation: An Analysis of Message Structure, Rhetoric, and Source Cues, *Political Communications*, 15(1), 45-61

The Crown Estate (2017), *Leasing Rounds* [ONLINE] Available at: https://www.thecrownestate.co.uk/energy-minerals-and-infrastructure/offshore-wind-energy/working-with-us/leasing-rounds/ [last accessed 30 March 2017]

The Crown Estate (2019), *On the seabed* [ONLINE] Available at: https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/ [last accessed 24 January 2020]

The Guardian (2012), *100 quangos abolished in cost-cutting bonfire*, The Guardian Online [ONLINE] Available at: https://www.theguardian.com/politics/2012/aug/22/100-quangos-abolished-bonfire [last accessed 30 March 2017]

The Guardian (2019), *The Blue Planet effect: the plastics revolution is just the start*, The Guardian Website 25 March 2019, [ONLINE] Available at: https://www.theguardian.com/commentisfree/2019/mar/25/plastics-revolution-marine-life, [lasted accessed 8 October 2019]

The Labour Party (2005), *The Labour Party Manifesto 2005* [ONLINE] Available at: http://www.politicsresources.net/area/uk/ge05/man/lab/manifesto.pdf [last accessed 30 March 2017]

Thomas, D. & Bowers, D. (2012), *Introducing oceanography*, Dunedin Academics, Edinburgh

Thomas, G. & Myers, K. (2015), *The Anatomy of The Case Study*, Sage, London

Throgmorton, J. (1991), The rhetorics of policy analysis, *Policy Sciences*, 24, 153-179

Tibbalds, F. (1992), *Make People Friendly Towns*, Taylor & Francis, London

TIC (1953), *Tyne Improvement Committee Minute Book 1*, 12 May 1953, Newcastle Museums Archive

Toke, D. (2011), The UK offshore wind power programme: A sea-change in UK energy policy?, *Energy Policy,* 39, 526-534

Tonin, S. & Lucaroni, G. (2017), Understanding social knowledge, attitudes and perceptions towards marine biodiversity: The case of Tegnue in Italy, *Ocean & Coastal Management,* 140, 68-78

Tonkiss, F. (2006), "Analysing text and speech: content and discourse analysis", in Seale, C. (ed), *Researching Society and Culture*, Sage Publishing, London

Tuan, Y. (1977), *Space and Place: The Perspective of Experience*, Edward Arnold, London

Tunstall, S. & Penning-Rowsell, E. (1998), The English beach: experience and values, *The Geographic Journal,* 164, 319-332

Turner, J. & Essex. S. (2016), Integrated terrestrial and marine planning in England's coastal inter-tidal zone: Assessing the operational effectiveness of the Coastal Concordat. *Marine Policy, 72*, 166-175

UCL (2019), NSIPs-Research [ONLINE] Available at: https://www.ucl.ac.uk/nationally-significant-infrastructure-projects/nsips-research [last accessed 18 November 2019]

Uitermark, J. & Nicholls, W. (2017), Planning for social justice: Strategies, dilemmas, tradeoffs, *Planning Theory*, 16(1), 32-50

UNEP (2006), *Marine and coastal ecosystems and human wellbeing: A synthesis report based on the findings of the Millennium Ecosystem Assessment*, UNEP

United Nations (1982), *United Nations Convention on the Law of the Sea* [ONLINE] Available at http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf [last accessed 30 March 2017]

United Nations (1987), *Our Common Future - Brundtland Report* [ONLINE] Available at: http://www.un-documents.net/our-common-future.pdf [last accessed 5 August 2017]

Varna, G. & Tiesdell, S. (2010), Assessing the Publicness of Public Space: The Star Model of Publicness, *Journal of Urban Design,* 15(4), 575-598

Varna, G. (2014), *Measuring Public Space: The Star Model*, Ashgate, Farnham

Verma, N. (2010), "Governance and Planning: A Pragmatic Approach" in Hillier, J. & Healey, P. (eds), *The Ashgate Research Companion to Planning Theory*, Ashgate, Farnham

Waldo, A. (2012), Offshore wind power in Sweden – A qualitative analysis of attitudes with particular focus on opponents, *Energy Policy,* 41, 692-702

Waldron, J. (1991), Homelessness and the Issue of Freedom, *UCLA Law Review,* 39, 295-324

Walker, M. (2014), Worth the Effort? NIMBY Public Comments Offer Little Value Added, *Public Administration Review,* 74(5), 629-629

Walsh, C. & Kannen, A. (2019), Planning at Sea: Shifting planning practices at the German North Sea coast, *Spatial Research and Planning*, 77(2), 147-164

Wang, H. (2004), Ecosystem Management and Its Application to Large Marine Ecosystems: Science, Law, and Politics, *Ocean Development & International Law*, 35, 41–74

Warren, C., Lumsden, C., O'Dowd, S. & Birnie, R. (2005), 'Green On Green': Public perception of wind power in Scotland and Ireland, *Journal of Environmental Planning and Management,* 48(6), 853-875

Waters, C., Zalasiewicz, J., Williams, M., Ellis, M. & Snelling, A. (2014), A stratigraphical basis for the Anthropocene? *Geological Society, London, Special Publications*, 395, 1–21

WCWF (2018), *White Cliffs Walking Festival Guide* [ONLINE] Available at: https://whitecliffswalkingfestival.org.uk/includes/wcwfbook2018.pdf [last accessed 6 December 2019]

Weir, S. (1995), "Quangos: Questions of Democratic Accountability", in Ridley, F. & Wilson, D. (eds), *The Quango Debate*, Oxford University Press, Oxford

Welsh Government (2019), *Marine Planning* [ONLINE] Available at: https://gov.wales/marine-planning [last accessed 27 November 2019]

Wenban-Smith, F. (2013), *Palaeolithic and Mesolithic Archaeology on the Sea-bed: Marine Aggregate Dredging and the Historic Environment: guidance note, British Marine Aggregate Producers Association and English Heritage, London* [ONLINE] Available at: http://www.bmapa.org/downloads/reference.php [last accessed 24 January 2020]

Weyl, P. (1970), *Oceanography: An introduction to the marine environment*. New York: Wiley

Wheeler, B., White, M., Fleming, L., Taylor, T., Harvey, A. & Depledge, M. (2014), 'Influences of the Oceans on Human Health and Well-being" in Bowen, R., Depledge, M., Carlarne, C. & Fleming, L. (eds), *Oceans and human health : Implications for Society and Well-Being*, Wiley Blackwell, Chichester

White Cliffs Country (2019), *Walking and Cycling in White Cliffs Country leaflet* [ONLINE] Available at: https://www.whitecliffscountry.org.uk/Plan/Maps-and-Guides.aspx [last accessed 6 December 2019]

Wilkinson, D. (1999) ,"Using Environmental Ethics to Create Ecological Law", in Holder, J. & McGillivary, D. (eds), *Locality and identity: Environmental issues in law and society*, Ashgate, Aldershot

Williams, R. (1985), *Keywords: a vocabulary of culture and society*, Oxford University Press, New York

Wilson, J. (2011), Colonising Space: The New Economic Geography in Theory and Practice, *New Political Theory*, 16(3), 373-397

Worpole, K. (2007), “The health of the people is the highest law”, in Thompson, C. & Traulou, P. (eds), *Open Space, People Space*, Taylor & Francis, Abingdon

Yates, J., Harris, L. & Wilson, N (2017), Multiple ontologies of water: Politics, conflict and implications for governance, *Environment and Planning D: Society and Space*, 35(5), 797-815

Yin, R. (2014), *Case study Research: Design and Methods 5th Edition*, Sage, London

Young, I. (1990), *Justice and the politics of difference*, Princeton University Press, Princeton New Jersey

Appendix 2. Definitions of Public Space with Application to Marine Space

Key quotations regarding public space definitions, emphasis added
"all the **physical space and social relations that determine the use of that space within the non-private realm** of cities … includes formal squares, roads and streets, but also vacant land, verges and other 'edge-space'. It includes all **space that has accepted communal access of use rights**, whether in public, private, communal or unknown ownership; a common property resource, but one whose boundaries may change over time" (Brown 2006, p10)
"Public space (broadly defined) related to all those parts of the built and natural environment, public and private, internal and external, urban and rural, where **the public have free, although no necessarily unrestricted access**" (Carmona & de Magalhaes 2008, p4) "Public space (narrowly defined) relates to all those parts of the built and natural environment where **the public has free access**" (Carmona & de Magalhaes 2008, p4)
"the **common ground** where people carry out the **functional and ritual activities that bind a community**" (Carr *et al* 1992, pxi) "**public places should be responsive, democratic and meaningful**" (Carr *et al* 1992, p19)
"the **presence of other people, activities, events, inspirations, and stimulation** comprise one of the most important qualities of public spaces" (Gehl 1996, p15)
"My definition is **a space – time continuum for political discourse.** By this phrase I mean the capacity for a connected and interactive human process of **communicative experience** … The discourse is political in that it **concerns the nature and future of the community and the public good**" (Goodsell 2003, p370)

"A public place is commonly defined as a place (or space) **created and maintained by public authority, accessible to all citizens for their use and enjoyment**" (Jackson 1984, p77)
"public space has **three core components ownership, accessibility, and intersubjectivity**… a place that is owned by the government, accessible to everyone without restriction and/or fosters communication and interaction." (Kohn 2004, p11)
Public space: "**covers a diversity of legal connections between the public and the space**" (Loftland 1998, p8)
Public space (and public place): "that part of the physical environment, which is **associated with public meanings** and functions." (Madanipour 2003, p4) Public sphere (and public realm): "has been used to refer to **a much broader concept: the entire range of places, people and activities that constitute the public dimension of human social life**… public space is a component part of the public sphere" (Madanipour 2003, p4) "Using the criteria of access, agency and interest, a space can be considered public if it **is controlled by the public authorities, concerns the people as a whole, is open or available to them, and is used or shared by all the members of a community**" (Madanipour 2003, p112)
"While there are many different ways to define public space, most agree that **public space includes all areas that are open and accessible to all members of the public in a society, in principle though not necessarily in practice**" (Orum & Neal 2010, p1)
"A space is made public by the nature of its boundary. It is a space into which **anyone may enter, and from which anyone may depart, without the consent of strangers, and without any declaration – however tacit – of a justifying purpose.** The boundary which creates a public space is both permeable and open to our public uses" (Scruton 1984, p15)
Public space… is not the same as public property. Indeed, the quality of publicness – **the publicness of space – seems to consist of the relationships established between property (as both a thing and a set of relationships and rules) and the people who inhabit, use, and create property**" (Staeheli & Mitchell 2008, p116)

“public space is a **slippery, complicated and shifting kind of space**” (Staeheli & Mitchell 2008, p117)
Public realm: “the most important part of our towns and cities. It is where the greatest amount of human contact and interaction takes place. It is all the parts of the urban fabric to which **the public have physical and visual access**. Thus, it extends from the streets, parks and squares of a town or city into the buildings, which enclose and line them.” (Tibbalds 1992, p1) Public place: “**belong to the people of that town** – they do not belong to developers or investors, the police or traffic wardens. Their nature will be influenced by their scale, shape and size; the ways in which they are related one to another; the uses and activities, which they contain, and the way in which traffic of all kinds is handled.” (Tibbalds 1992, p14)

Varna 2014, pp23, emphasis added

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Appendix 4A. Stage 1 Data Collection

Legislation, Policy and Guidance Documents

Author	Title	Type	
2002			
Defra	Safeguarding Our Seas	Policy	Defra 2002
2004			
Defra	Review of Marine Nature Conservation, Working Group report to Government	Report	Defra 2004
2005			
The Labour Party	The Labour Party Manifesto 2005	Manifesto	The Labour Party 2005
2007			
Defra	A Sea Change: A Marine Bill White Paper	White Paper	Defra 2007
2008			
Defra	Managing our marine resources – licensing under the Marine Bill	Guidance	Defra 2008a
Defra	Summary of responses to the public consultation on the draft Marine Bill from 3 April 2008 – 26 June 2008	Consultation	Defra 2008b
Defra	Managing our marine resources: The Marine Management Organisation	Guidance	Defra 2008c
Defra	Impact Assessment of the Marine Bill - Final Version	Impact Assessment	Defra 2008d
Defra	Marine and Coastal Access Bill Policy Document	Bill	Defra 2008e
HM Government	Draft Marine Bill - Policy Paper	Draft Bill	HM Government 2008a
HM Government	Draft Marine Bill - Draft Marine Bill	Draft Bill	HM Government 2008b
HM Government	Draft Marine Bill – Impact Assessment	Draft Bill	HM Government 2008c
HM Government	Joint Committee on the Draft Marine Bill: Volume 1 Report and formal minutes	Committee Report	HM Government 2008d
HM Government	Joint Committee on the Draft Marine Bill Volume 2 Oral and written evidence	Committee Report	HM Government 2008e
HM Government	Taking forward the marine Bill: The Government response to pre-legislative scrutiny and public consultation	Draft Bill	HM Government 2008f
2009			

HM Government	Marine and Coastal Access Act 2009,	Legislation	HM Government 2009a
HM Government	Marine and Coastal Access Act 2009 Explanatory Notes	Legislation	HM Government 2009b

2010

Defra	Government guidance to the Marine Management Organisation (MMO) on its role in relation to applications, and proposed applications, to the Infrastructure Planning Commission (IPC) for development consent under the Planning Act 2008	Guidance	Defra 2010a
Defra	Second consultation on secondary legislation under the Marine and Coastal Access Act: Part 4 Marine licensing	Consultation Document	Defra 2010b
Defra	Consultation on a marine planning system for England	Consultation Document	Defra 2010c
Defra	UK Marine Policy Statement: A draft for consultation	Policy - draft	Defra 2010d
Defra	An initial summary of responses to The UK Marine Policy Statement: A draft for consultation (21 July 2010 – 13 October 2010)	Consultation	Defra 2010e
Defra	Government response to the consultation on secondary legislation under the Marine and Coastal Access Act: Part 4 Marine licensing	Consultation Document	Defra 2010f
Defra	Charting Progress 2: An Assessment of the State of UK Seas	Policy	Defra 2010g
HM Government	Draft UK MPS Considered in Grand Committee – debate transcript	Debate	HM Government 2010

2011

Defra	Guidance on Marine licensing under Part 4 of the Marine and Coastal Access Act 2009	Guidance	Defra 2011a
Defra	Summary of responses to the consultation on a marine planning system for England and related Impact Assessment	Consultation Document	Defra 2011b
Defra	A description of the marine planning system for England	Guidance	Defra 2011c
HM Government	House of Commons, environment, Food and Rural Affairs Committee: The Marine Policy Statement: Second Report of	Committee Report	HM Government 2011a

	Session 2010-11. Report, together with formal minutes, oral and written evidence		
HM Government	UK Marine Policy Statement	Policy	HM Government 2011b
HM Government	Marine Licensing (Delegation of Functions) Order 2011	Legislation	HM Government 2011c
HM Government	UK Marine Policy Statement: Summary of Differences between the draft and final UK Marine Policy Statement	Policy	HM Government 2011d
HM Government	UK Marine Policy Statement: Post Adoption Statement	Policy	HM Government 2011e
HM Government	Secretary of State for environment, Food and Rural Affairs' Statement in Response to the environment, Food and Rural Affairs Committee's Recommendations on the Marine Policy Statement,	Policy	HM Government 2011f

2014

MMO	Marine licensing and government better regulation objectives annual assessment	Review	MMO 2014a
MMO	Generating energy offshore	Guidance	MMO 2014b

2017

MMO	Marine Licence Review: A report produced for the Marine Management Organisation MMO Project No: 1126	Review	MMO 2017

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Appendix 4B. Stage 2a Data Collection

Marine Licence Application Data Table Fields

Field Name	Data Type/Validation	Description
FID	Numeric	Unique Identifier
Shape *	Multipoint/Polygon/ Polyline	Refers to coordinate type – point, area or line
CaseR	MLA/year/xxxxx	Unique case reference number (entries ending /x indicate a variation application)
ProjectTy	Free text	Activity type based on licensable activity
AreaName	Alphanumeric	Named co-ordinate area
LicenceTy	Licence Type	Field not relevant as all entries marked as 'marine licence', 'marine licence (burial at sea)'* or 'marine application'. *burial at sea is also an activity type identified in the 'ProjectTy' field.
LicenceNo	L/year/xxxxx	Unique marine licence reference number. Does not relate to case reference number. (entries ending /x indicate this is a variated marine licence)
ProjTitle	Free text	The project title submitted by the applicant
CaseStatus	Text	The status of the application: 'Completed', 'Submitted', 'Update in Progress', 'Variation Requested' or 'Withdrawn'
ProjCost	Numeric	Overall project cost, not separated into activities
RelConsent	Free Text	Related marine licences for this application – usually blank
OrgName	Free Text	The applicants organisation name
Sensitive	Binary	Sensitive marine licence applications marked "1". All others "0".
SubmitDate	Date	The data the application was submitted to MMO
PStartDate	Date	The proposed project start date
PEndDate	Date	The proposed project end date
LStartDate	Date	The Start date of the licence (usually the date the licence is issued)
LEndDate	Date	The expiry date of the licence
ProjSector	Free Text	Development sector, if applicable. Can be blank
ProjClass	Free Text	Type of activity, if applicable. Can be blank
DredgeMatT	Numeric	Tonnage for dredge applications. Blank for all other activity types

National	Binary	If application if for activity in whole English sea area then “1”. All other “0”
LINK	URL	Link to MMO marine licence public register for this application
Fast_Track	Binary	If application is ‘fast track’ (Band 1) then “1”. All others “0”

Appendix 4C. Stage 2b Data Collection

Marine Licence Application Case Example Documents

Reference	Document Title	Date
MLA/2017/00228. Burial at sea - Mr Patrick Hatchard		
BAS1	Application Form	14/06/2017
BAS2	Certificate of Non-infection	12/06/2017
BAS3	Coroner's Acknowledgement of receipt of notice of intention to remove a body out of England	14/06/2017
BAS4	Death Certificate	09/06/2017
BAS5	Marine Licence	23/06/2017
MLA/2016/00077/5. Component exchanges (maintenance) at Burbo Bank offshore wind farm		
BB1	Application Form	25/02/2016
BB2	Natural England email correspondence	01/03/2016
BB3	Marine Licence	16/03/2016
BB4	Variation Request 2 Accepted	11/10/2016
BB5	Marine Licence variation 2	11/10/2016
BB6	Variation Request 3 Accepted	13/10/2016
BB7	Marine Licence variation 3	13/10/2016
BB8	Variation Request 4 Accepted	10/02/2017
BB9	Marine Licence variation 4	10/02/2017
BB10	Variation Request 5 Accepted	04/05/2017
BB11	Likely significant effect assessment	04/05/2017
BB12	Marine Licence variation 5	04/05/2017
MLA/2017/00503. Bognor Regis - Barrack Lane		
BL1	Application Form	11/12/2017
BL2	Self-service Qualifying Responses	11/12/2017
BL3	Marine Licence	11/12/2017
MLA/2015/00315/1. Imperial Wharf		
IW1	Application Form	22/07/2015
IW2	Specification for The Repair of Bracing and Installation of Cathodic Protection at Imperial Wharf, Gravesend	01/06/2015
IW3	Marine Licence	04/09/2015
IW4	Variation Request 1 Accepted	22/09/2015
IW5	Marine Licence variation 1	22/09/2015
MLA/2016/00249. Lost Frontiers - DNA of North Sea		
LF1	Application Form	02/06/2016
LF2	Crown Estate email correspondence	15/10/2015
LF3	JNCC email correspondence	02/06/2016
LF4	Environmental Statement and Planning Review	02/06/2016

LF5	Marine Licence	11/08/2016

MLA/2015/00448. Marine Growth Removal at Ormonde Pontoon, Ramsden Dock

OP1	Application Form	10/11/2015
OP2	Environmental Appraisal for Marine Growth Clearance	09/11/2015
OP3	Natural England Pre-application Advice	18/11/2015
OP4	Stop the Spread - invasive species note	10/11/2015
OP5	Marine Licence	04/12/2015

MLA/2015/00241. Emergency Dredging Application at West India Dock

WID1	Application Form	26/05/2016
WID2	Method Statement	06/08/2013
WID3	Dredge Area	10/07/2014
WID4	Risk Assessment	06/08/2013
WID5	Marine Licence	29/05/2015

MLA/2016/00237/1. Wandle River Wall SI Works

WR1	Application Form	25/05/2016
WR2	Indicative method statement Rev B	15/06/2016
WR3	Marine Licence	04/07/2016
WR4	Variation Request 1 Cancelled	15/08/2016

MLA/2015/00027. Appledore Quay signs and new mooring anchors

AQ2	Planning permission	04/01/2017
AQ3	Method Statement	27/01/2017
AQ4	Marine Licence	13/04/2017

MLA/2017/00018. Hamford Water, Walton-on-the-Naze | Surface Water Outfall Headwall

HW1	Application Form	19/01/2017
HW2	Ecological Assessment	19/01/2017
HW3	Marine Licence	09/05/2017

MLA/2015/00172/1. Release of Rhodamine Dye Tracer

RDT1	Application Form	02/04/2015
RDT2	Survey data sheet for tracer dye	02/04/2015
RDT3	Environmental information	02/04/2015
RDT4	Proposed dye release location chart	02/04/2015
RDT5	Marine Licence	09/06/2015
RDT6	Variation Request 1 Rejected	06/10/2015

MLA/2015/00263. Repairs to damaged/corroded quayside piles

CQP1	Application Form	10/06/2015
CQP2	Site plan	10/06/2015
CQP3	Site photo	10/06/2015
CQP4	Flood Defence Consent email	10/08/2015
CQP5	Site location	10/06/2015

CQP6	Marine Licence	04/11/2015

MLA/2017/00312. Keadby Power Station Intake & Outfall Dredging

KPS1	Application Form	08/12/2017
KPS2	Site location Plan	08/12/2017
KPS3	Water Framework Directive Assessment	08/12/2017
KPS4	Sample Analysis Results	08/12/2017
KPS5	Method Statement	08/12/2017
KPS6	Public notice - previous application	08/12/2017
KPS7	Consultation response - IFCA	19/10/2017
KPS8	Consultation response - Cefas	31/10/2017
KPS9	Consultation response - EA	05/10/2017
KPS10	Consultation response - Natural England	02/10/2017
KPS11	Consultation response - Others (online)	31/10/2017
KPS12	Marine Licence	21/11/2017

MLA/2015/00282/2. Pontoon for boat access, Wivenhoe, Colne Estuary

PBA1	Application Form	25/06/2015
PBA2	Location chart	25/06/2015
PBA3	Project background	25/06/2015
PBA4	Project details	25/06/2015
PBA5	Site photo	25/06/2015
PBA6	Method Statement	25/06/2015
PBA7	Planning permission	23/01/2015
PBA8	Site map	25/06/2015
PBA9	Risk Assessment	25/06/2015
PBA10	Public notice	06/10/2025
PBA11	MCZ Screening Opinion	29/09/2015
PBA12	Likely significant effect assessment	29/10/2015
PBA13	Marine Licence	11/11/2015
PBA14	Variation Request 1 Accepted	01/12/2015
PBA15	Marine Licence Variation 1	10/12/2015
PBA16	Variation Request 2 Accepted	15/03/2016
PBA17	Marine Licence Variation 2	06/04/2016

MLA/2015/00318. Cargo off wreck Neppo

CWN1	Application Form	23/07/2015
CWN2	Marine Licence	22/12/2015

MLA/2017/00130. Quayside Marina Hoist Dock

QM1	Application Form	13/04/2017
QM2	Supporting Statement and Water Framework Directive Assessment	13/04/2017
QM3	Proposed elevations	13/04/2017
QM4	Site Location Plan	13/04/2017
QM5	Likely significant effect assessment	13/04/2017
QM6	Consultation response - Natural England	06/07/2017

QM7	Consultation response - Historic England	17/07/2017
QM8	Consultation response - Southampton City Council	14/07/2017
QM9	Consultation response - Others (online)	27/07/2017
QM10	Marine Licence	28/07/2017

MLA/2015/00044/1. Bembridge Harbour Maintenance Dredging

BH1	Application Form	26/04/2015
BH2	WFD Assessment	26/04/2015
BH3	Dredge Area	26/04/2015
BH4	Sample Analysis Results	26/04/2015
BH5	Public Notice	27/03/2015
BH6	MMO email to IOW Council for consultation	23/03/2015
BH7	Consultation response - Trinity House	23/04/2015
BH8	Applicant email to MMO - request for update	01/05/2015
BH9	MMO email to Applicant - update on consultation	01/05/2015
BH10	Marine Licence	28/05/2015
BH11	Variation Request 1 Accepted	01/06/2015
BH12	Marine Licence Variation 1	04/06/2015

MLA/2017/00095/1. Bedhampton Silt Disposal

BSD1	Application Form	21/03/2017
BSD2	Sample Analysis Results	21/03/2017
BSD3	Marine Licence	21/06/2017
BSD4	Variation Request 1 Accepted	26/06/2017
BSD5	Marine Licence Variation 1	16/08/2017

MLA/2016/00127. Greater Gabbard Offshore Wind Farm Met Mast IGMMX Removal of lattice

GG1	Application Form	31/03/2016
GG2	Marine Licence	16/06/2016

MLA2017/00118/1. Rooswijk Protected Wreck Site, Archaeological Excavation and Preservation

RPW1	MCMS screen - application hidden from public register	08/04/2017
RPW2	Historic England Consent	31/03/2017
RPW3	WFD and Nature Conservation Assessment (redacted)	05/04/2017
RPW4	Marine Licence	13/06/2017
RPW5	Marine Licence Variation 1	16/06/2017

MLA/2015/00433/2. Able Seaton Port Quay 6 Cofferdam Removal

ASP1	Application Form	21/10/2015
ASP2	Proposed site plan	21/10/2015
ASP3	Existing site plan	21/10/2015
ASP4	Site location plan	21/10/2015
ASP5	Marine licence enquiry email	21/10/2015

ASP6	Environmental Impact Statement - Readers Guide (Seaton Port Teesside Environmental Reclamation and Recycling Centre Facility)	21/10/2015
ASP7	Environmental Impact Statement (Seaton Port Teesside Environmental Reclamation and Recycling Centre Facility)	21/10/2015
ASP8	Non-Technical Summary	21/10/2015
ASP9	Cofferdam removal execution statement	21/10/2015
ASP10	Draft schedule	21/10/2015
ASP11	Water Framework Directive Assessment	01/02/2016
ASP12	Environmental Statement Addendum Non-Technical Summary	01/02/2016
ASP13	Environmental Statement Addendum	01/02/2016
ASP14	EIA Consent Decision Report	10/06/2016
ASP15	Marine licence	10/06/2016
ASP16	Variation Request 1 Accepted	14/06/2016
ASP17	Marine licence variation 1	21/06/2016
ASP18	Variation request 2 Open	22/02/2018

MLA/2016/00168/2. Gunfleet Sands 3 Offshore Wind Farm O&M Marine Licence

GuS1	Application Form	15/04/2016
GuS2	Supporting Environmental Information	15/04/2016
GuS3	Marine licence	30/09/2016
GuS4	Variation Request 2 Accepted	27/10/2017
GuS5	Marine licence variation 2	08/01/2018

MLA/2017/00125/1. Shell Flat Met Masts Decommissioning Project

SF1	Application Form	13/04/2017
SF2	Report	13/04/2017
SF3	Likely significant effect assessment	07/06/2017
SF4	Consultation response - Crown Estate (email)	30/06/2017
SF5	Waste Hierarchy Plan	31/05/2017
SF6	Marine Licence Dropped Incident report pro forma	13/04/2017
SF7	Public notice	14/06/2017
SF8	Consultation response - Natural England	30/06/2017
SF9	Natural England advice	02/05/2017
SF10	Consultation response - IFCA	21/06/2017
SF11	Consultation Reponses - online	30/07/2017
SF12	Marine licence	20/07/2017
SF13	Variation Request 1 Accepted	03/08/2017
SF14	Marine licence variation 1	10/08/2017

MLA/2017/00330. Managed Breach of Shingle Spit at Pagham

SSP1	Application Form	10/09/2015
SSP2	Environmental Statement vol 1 report	10/09/2015
SSP3	Environmental Statement vol 2 Appendices	10/09/2015

SSP4	Further Information for Planning Application and Marine Licence	01/05/2016
SSP5	MCZ Assessment	03/02/2017
SSP6	Marine Licence	01/09/2017

Appendix 4D. Stage 3 Data Collection

Goodwin Sands Marine Licence Application Documents

Reference	Document Title	Date
GS1	Application Form	19/05/2016
GS2	KML location file	19/05/2016
GS3.1	Environmental Statement NTS	16/05/2016
GS3.2	EIA Outcome Part 1	16/05/2016
GS3.3	EIA Outcome Part 2	16/05/2016
GS3.4	Appendices Part 1	16/05/2016
GS3.5	Appendices Part 2	16/05/2016
GS4.1	First Direct Consultation - Cefas Ecology	01/07/2016
GS4.2	First Direct Consultation - Cefas Benthic	01/07/2016
GS4.3	First Direct Consultation - Cefas Coastal Processes	01/07/2016
GS4.4	First Direct Consultation - Cefas Shellfisheries	01/07/2016
GS4.5	First Direct Consultation - DfT	01/07/2016
GS4.6	First Direct Consultation - Dover District Council	01/07/2016
GS4.7	First Direct Consultation - EA	01/07/2016
GS4.8	First Direct Consultation - EA further consultation	01/07/2016
GS4.9	First Direct Consultation - Historic England	01/07/2016
GS4.10	First Direct Consultation - Kent and Essex IFCA	01/07/2016
GS4.11	First Direct Consultation - MCA	01/07/2016
GS4.12	First Direct Consultation - MMO Coastal Office	01/07/2016
GS4.13	First Direct Consultation - NE	01/07/2016
GS4.14	First Direct Consultation - NFFO	01/07/2016
GS4.15	First Direct Consultation - Sandwich Town Council	01/07/2016
GS4.16	First Direct Consultation - Thanet Fishermen’s Association	01/07/2016
GS4.17	First Direct Consultation - The Crown Estate	01/07/2016
GS4.18	First Direct Consultation - Wildlife Trust	01/07/2016
GS5	First Public Consultation Responses	01/07/2016
GS6	Further Information (folder)	01/07/2016
GS7	MMO response to Goodwin Sands application	05/08/2016
GS8	Further information response	23/09/2016

GS9	Port of Dover Open Meeting	05/08/2016
GS10	SOS meeting points of discussion	20/09/2016
GS11	SOS meeting minutes	20/09/2016
GS12	DHB response to EA	27/09/2016
GS13	WSI	07/10/2016
GS14.1	Second Direct Consultation - British Sub Aqua Club	01/11/2016
GS14.2	Second Direct Consultation - Cefas Benthic	01/11/2016
GS14.3	Second Direct Consultation - Cefas Coastal Processes	01/11/2016
GS14.4	Second Direct Consultation - Cefas Fisheries	01/11/2016
GS14.5	Second Direct Consultation - Dover District Council	01/11/2016
GS14.6	Second Direct Consultation - EA	01/11/2016
GS14.7	Second Direct Consultation - Further Cefas Benthic	01/11/2016
GS14.8	Second Direct Consultation - Further Cefas Coastal Processes	01/11/2016
GS14.9	Second Direct Consultation - Further Cefas Fisheries	01/11/2016
GS14.10	Second Direct Consultation - Further NE	01/11/2016
GS14.11	Second Direct Consultation - Historic England	01/11/2016
GS14.12	Second Direct Consultation - MoD	01/11/2016
GS14.13	Second Direct Consultation - Kent County Council	01/11/2016
GS14.14	Second Direct Consultation - MCA	01/11/2016
GS14.15	Second Direct Consultation - MMO Coastal Office	01/11/2016
GS14.16	Second Direct Consultation - NE	01/11/2016
GS14.17	Second Direct Consultation - NE (preliminary monitoring plan)	01/11/2016
GS14.18	Second Direct Consultation - RYA	01/11/2016
GS14.19	Second Direct Consultation - Thanet Fishermen’s Association	01/11/2016
GS14.20	Second Direct Consultation - Trinity House	01/11/2016
GS14.21	Second Direct Consultation - Wildlife Trust	01/11/2016
GS15	Second Public Consultation Responses	01/11/2016
GS16	Natural England Monitoring Meeting	09/11/2016
GS17.1	Heritage Meeting Agenda	30/11/2016
GS17.2	Heritage Meeting HE Consultation Note	30/11/2016
GS17.3	Heritage Meeting Minutes	30/11/2016
GS18.1	Magnetometer Survey - Letter	15/12/2016

GS18.2	Magnetometer Survey - Report	15/12/2016
GS18.3	Magnetometer Survey - HE response	06/01/2017
GS18.4	Magnetometer Survey - MMO response	24/01/2017
GS19	MMO response to Further information	20/12/2016
GS20	MMO public representations letter	22/12/2016
GS21	MMO response to WSI	24/01/2017
GS22	Historic England Meeting Minutes	18/07/2017
GS23	Preliminary Monitoring Plan	16/10/2016
GS24	MMO response to Preliminary Monitoring Plan	28/02/2017
GS25	Teleconference minutes (MMO, The Wildlife Trust, Natural England)	07/02/2017
GS26.1	Goodwin Sands Clarification Document - Report	10/08/2017
GS26.2	Goodwin Sands Clarification Document - Heritage meeting minutes	10/08/2017
GS26.3	Goodwin Sands Clarification Document - Archaeological review	10/08/2017
GS26.4	Goodwin Sands Clarification Document - Archaeological review annex	10/08/2017
GS27	DHB Public Representation Response	08/10/2017
GS28.1	Third Direct Consultation - Thanet Fishermen’s Associate	01/09/2017
GS28.2	Third Direct Consultation - Trinity House	01/09/2017
GS28.3	Third Direct Consultation - MCA	01/09/2017
GS28.4	Third Direct Consultation - Historic England	01/09/2017
GS28.5	Third Direct Consultation - British Sub Aqua Club	01/09/2017
GS28.6	Third Direct Consultation - Kent County Council	01/09/2017
GS28.7	Third Direct Consultation - Wildlife Trust	01/09/2017
GS28.8	Third Direct Consultation - MoD	01/09/2017
GS28.9	Third Direct Consultation - NE	01/09/2017
GS28.10	Third Direct Consultation - MMO Coastal Office	01/09/2017
GS28.11	Third Direct Consultation - Kent & Essex Ifca	01/09/2017
GS28.12	Third Direct Consultation - EA	01/09/2017
GS29	Response to Historic England	27/11/2017

Documents published with marine licence		
GS30	MMO Scoping Response Schedule (uploaded at decision)	25/08/2015
GS31	MMO Scoping Response Letter (uploaded at decision)	25/08/2015
GS32	Email Dover DC - MMO (uploaded at decision)	22/03/2017
GS33	Email Attachment Dover DC - MMO (uploaded at decision)	22/03/2017
GS34	Letter Cefas - MMO (uploaded at decision)	12/06/2017
GS35	HE/MMO/DHB Meeting Minutes	15/12/2017
GS36	DHB Response to HE	27/11/2017
GS37	Historic England Response to DHB Letter	18/12/2017
GS38	WSI v4	21/12/2017
GS39	Historic England Response to WSI	16/01/2018
GS40	WFD Assessment	10/05/2018
GS41	pMCZ Screening	25/06/2018
GS42	pMCZ Stage One Assessment	25/07/2018
GS43	EIA Consent Decision Report	25/07/2018
GS44	Decision Letter	25/07/2018
GS45	Licence Document (Marine)	25/07/2018
GS46	Guide to Good Practice for Ensuring Navigational Safety	25/07/2018
GS47	Marine Coordinate Schedules	25/07/2018
GS48	Marine Aggregates Fisheries Liaison CoP with Survey Notification	25/07/2018
GS49	Returns	25/07/2018
GS50	Schedule 2 (EIA Consent Decision) (Duplicate)	25/07/2018
GS51	Third Consultation Aug - Sept 2017 Public Comments	25/07/2018
GS52	MMO Website - Application page	26/07/2018
GS53	MMO Press release	26/07/2018
GS54	Kent online news story	26/07/2018
GS55	Minutes of Meeting Held at House of Commons on Monday 4th June 2018	26/07/2018

Appendix 5A. English Marine Legislation and Policy Timeline

	Planning Act (and related)	Marine and Coastal Access Act	Marine Licensing Secondary Legislation	Marine Policy Statement	Marine Planning (overarching)
Mar-07		Marine Bill White Paper			
Apr-07					
May-07	Planning White Paper				
Jun-07					
Jul-07					
Aug-07	Consultation closes				
Sep-07					
Oct-07					
Nov-07	Draft Planning Bill				
Dec-07	House of Commons				
Jan-08	Public Bill Committee / House of Commons				
Feb-08	House of Commons				
Mar-08					
Apr-08		Draft Marine Bill			
May-08		Joint Committee public evidence			
Jun-08	Houes o Commons / House of Lords	MCAA Consultation close			
Jul-08	House of Lords				
Aug-08					
Sep-08					
Oct-08	House of Lords				
Nov-08	House of Lords				

Dec-08	**Planning Act 2008**	MCAA Bill introduced in HoL			
Jan-09		House of Lords			
Feb-09		House of Lords			
Mar-09		House of Lords			
Apr-09		House of Lords			
May-09		House of Lords			
Jun-09		House of Commons			
Jul-09		House of Commons	Marine Licensing SI 1st draft		
Aug-09					
Sep-09			Consultation closes		
Oct-09		House of Commons			
Nov-09		**Marine and Coastal Access Act 2009**			
Dec-09					
Jan-10					
Feb-10					
Mar-10					
Apr-10					
May-10	**Coalition Government gains power**				
Jun-10					
Jul-10			Marine Licensing SI 2nd draft	UK MPS Draft	Marine Planning Consultation commences
Aug-10					
Sep-10					Marine Planning Consultation closes
Oct-10			Consultation closes	MPS Consultation closes	

Nov-10					
Dec-10				MPS Parliamentary Debate	
Jan-11					
Feb-11					
Mar-11				**UK Marine Policy Statement**	
Apr-11			**The Marine Licensing (Delegation of Functions) Order 2011 (SI)**		
May-11					
Jun-11					
Jul-11	NPS for Renewable Energy Infrastructure				
Aug-11					
Sep-11					
Oct-11					
Nov-11	**Localism Act; abolition of IPC and Regional Planning**				
Dec-11					
Jan-12	National Policy Statement for Ports				
Feb-12					
Mar-12	**National Planning Policy Framework**				

Appendix 5B. Comparison between MCAA2009 and Draft Marine Bill

Marine and Coastal Access Act 2009	Draft Marine Bill
Part 1. The Marine Management Organisation. Chapter 1. Establishment	
2 General objective (1) It is the duty of the MMO to secure that the MMO functions are so exercised that the carrying on of activities by persons in the MMO's area is managed, regulated or controlled— (a) with the objective of making a contribution to the achievement of sustainable development (see subsections (2) and (4) to (11)), (b) taking account of all relevant facts and matters (see subsection (3)), and (c) in a manner which is consistent and co-ordinated (see subsection (12)). Any reference in this Act to the MMO's "general objective" is a reference to the duty imposed on the MMO by this subsection. (2) In pursuit of its general objective, the MMO may take any action which it considers necessary or expedient for the purpose of furthering any social, economic or environmental purposes. (3) For the purposes of subsection (1)(b), the facts and matters that may be taken into account include each of the following—	2 General objective (1) The MMO is to carry out its functions with the objective of making a contribution to the achievement of sustainable development.

(a) scientific evidence, whether available to, or reasonably obtainable by, the MMO; (b) other evidence so available or obtainable relating to the social, economic or environmental elements of sustainable development; (c) such facts or matters not falling within paragraph (a) or (b) as the MMO may consider appropriate. See also section 24 (powers of MMO in relation to research). (4) The Secretary of State is to give the MMO guidance as to the manner in which the MMO is to seek to secure that the contribution to the achievement of sustainable development mentioned in subsection (1)(a) is made (and see also section 38 (guidance)). (5) In preparing any such guidance the Secretary of State must take into consideration— (a) the functions of the MMO, and (b) the resources available, or likely to be available, to the MMO. (6) A draft of any guidance proposed to be given under this section is to be laid before each House of Parliament.	(2) The Secretary of State is to give the MMO guidance as to the manner in which the MMO is to make its contribution to the achievement of sustainable development. (3) The Secretary of State must consult the MMO before giving any guidance under subsection (2). (4) In preparing any such guidance the Secretary of State must take into consideration – (a) the functions of the MMO, and (b) the resources available, or likely to be available, to the MMO.

(7) Guidance is not to be given under this section until after the end of the period of 40 days beginning with— (a) the day on which a draft of the guidance is so laid, or (b) if the draft is laid on different days, the later of the two days. (8) If, within that period, either House resolves that the guidance, the draft of which was laid before it, should not be given, the Secretary of State must not give that guidance. (9) In reckoning any period of 40 days for the purposes of subsection (7) or (8), no account is to be taken of any time during which— (a) Parliament is dissolved or prorogued, or (b) both Houses are adjourned for more than four days. (10) The Secretary of State must publish, in such manner as the Secretary of State may determine, any guidance given to the MMO under this section. (11) The MMO must provide any person on request with a copy of the whole or any part of any such guidance.	(5) The MMO must publish, in such manner as it may determine, any guidance given to it under this section. (6) The MMO must provide any person on request with a copy of the whole or any part of any such guidance.

(12) In this section— "consistent and co-ordinated" includes taking into account the effect (if any) that decisions in respect of— (a) any particular part of the MMO's area, or (b) the carrying on of any activity within that area, will have on any other part of that area or the carrying on of any other activity in that area; "evidence" includes predictions and other opinions resulting from the consideration of evidence by any person; "the MMO's area" means those parts of the UK marine area, or of the United Kingdom, where MMO functions are exercisable; "MMO functions" means functions exercisable by or on behalf of the MMO. (p2)	
Part 1. The Marine Management Organisation. Chapter 4. Miscellaneous, General and Supplemental Provisions	
23 MMO's role in relation to applications for development consent (1) The Planning Act 2008 (c. 29) is amended as set out in subsections (2) to (6). (2) In section 42 (duty to consult about proposed applications for orders granting development consent)—	Not in Draft

(a) the existing provision is renumbered as subsection (1); (b) in that subsection, after paragraph (a) insert— “(aa) the Marine Management Organisation, in any case where the proposed development would affect, or would be likely to affect, any of the areas specified in subsection (2),”; (c) after subsection (1) insert— “(2) The areas are— (a) waters in or adjacent to England up to the seaward limits of the territorial sea; (b) an exclusive economic zone, except any part of an exclusive economic zone in relation to which the Scottish Ministers have functions; (c) a Renewable Energy Zone, except any part of a Renewable Energy Zone in relation to which the Scottish Ministers have functions; (d) an area designated under section 1(7) of the Continental Shelf Act 1964, except any part of that area which is within a part of an exclusive economic zone or Renewable Energy Zone in relation to which the Scottish Ministers have functions.” (3) In consequence of the amendments made by subsection (2) of this section—	

(a) the heading to section 43 becomes “Local authorities for purposes of section 42(1)(b)”, and (b) the heading to section 44 becomes “Categories for purposes of section 42(1)(d)”. (4) In section 55 (acceptance of applications), in subsection (5), in the definition of “local authority consultee”— (a) for “section 42(b)” substitute “section 42(1)(b)”; (b) for “section 42(c)” substitute “section 42(1)(c)”. (5) In section 56 (duty to notify persons of accepted applications)— (a) in subsection (2), after paragraph (a) insert— “(aa) the Marine Management Organisation, in any case where the development for which the application seeks development consent would involve the carrying on of any activity in one or more of the areas specified in subsection (2A),”; (b) after subsection (2) insert— “(2A) The areas are— (a) waters in or adjacent to England up to the seaward limits of the territorial sea;	

(b) an exclusive economic zone, except any part of an exclusive economic zone in relation to which the Scottish Ministers have functions; (c) a Renewable Energy Zone, except any part of a Renewable Energy Zone in relation to which the Scottish Ministers have functions; (d) an area designated under section 1(7) of the Continental Shelf Act 1964, except any part of that area which is within a part of an exclusive economic zone or Renewable Energy Zone in relation to which the Scottish Ministers have functions." (6) In section 102 (definition of "interested party" etc)— (a) in subsection (1), after paragraph (b) insert— "(ba) the person is the Marine Management Organisation and the development for which the application seeks development consent would involve the carrying on of any activity in one or more of the areas specified in subsection (1A),"; (b) after subsection (1) insert— "(1A) The areas are— (a) waters in or adjacent to England up to the seaward limits of the territorial sea;	

(b) an exclusive economic zone, except any part of an exclusive economic zone in relation to which the Scottish Ministers have functions; (c) a Renewable Energy Zone, except any part of a Renewable Energy Zone in relation to which the Scottish Ministers have functions; (d) an area designated under section 1(7) of the Continental Shelf Act 1964, except any part of that area which is within a part of an exclusive economic zone or Renewable Energy Zone in relation to which the Scottish Ministers have functions." (7) The Secretary of State must give guidance to the MMO as to the kind of representations which may be made by the MMO under— (a) Chapter 2 of Part 5 of the Planning Act 2008 (c. 29) (pre-application procedure), or (b) Part 6 of that Act (deciding applications for orders granting development consent). (p15)	
Part 4. Marine Licensing. Chapter 1. Marine Licences	
66 Licensable marine activities (1) For the purposes of this Part, it is a licensable marine activity to do any of the following—	No change

1. To deposit any substance or object within the UK marine licensing area, either in the sea or on or under the sea bed, from— (a) any vehicle, vessel, aircraft or marine structure, (b) any container floating in the sea, or (c) any structure on land constructed or adapted wholly or mainly for the purpose of depositing solids in the sea. 2. To deposit any substance or object anywhere in the sea or on or under the sea bed from— (a) a British vessel, British aircraft or British marine structure, or (b) a container floating in the sea, if the deposit is controlled from a British vessel, British aircraft or British marine structure. 3. To deposit any substance or object anywhere in the sea or on or under the sea bed from a vehicle, vessel, aircraft, marine structure or floating container which was loaded with the substance or object— (a) in any part of the United Kingdom except Scotland, or (b) in the UK marine licensing area.	

4. To scuttle any vessel or floating container in the UK marine licensing area. 5. To scuttle any vessel or floating container anywhere at sea, if the scuttling is controlled from a British vessel, British aircraft or British marine structure. 6. To scuttle any vessel or floating container anywhere at sea, if the vessel or container has been towed or propelled, for the purpose of that scuttling,— (a) from any part of the United Kingdom except Scotland, or (b) from the UK marine licensing area, unless the towing or propelling began outside that area. 7. To construct, alter or improve any works within the UK marine licensing area either— (a) in or over the sea, or (b) on or under the sea bed. 8. To use a vehicle, vessel, aircraft, marine structure or floating container to remove any substance or object from the sea bed within the UK marine licensing area.	

9. To carry out any form of dredging within the UK marine licensing area (whether or not involving the removal of any material from the sea or sea bed). 10. To deposit or use any explosive substance or article within the UK marine licensing area either in the sea or on or under the sea bed. 11. To incinerate any substance or object on any vehicle, vessel, marine structure or floating container in the UK marine licensing area. 12. To incinerate any substance or object anywhere at sea on— (a) a British vessel or British marine structure, or (b) a container floating in the sea, if the incineration is controlled from a British vessel, British aircraft or British marine structure. 13. To load a vehicle, vessel, aircraft, marine structure or floating container in any part of the United Kingdom except Scotland, or in the UK marine licensing area, with any substance or object for incineration anywhere at sea. (p43)	
68 Notice of applications	No change

(1) Having received an application for a marine licence, the appropriate licensing authority must— (a) publish notice of the application, or (b) require the applicant to publish notice of it. (2) Publication under subsection (1) must be in such manner as the authority thinks is best calculated to bring the application to the attention of any persons likely to be interested in it. (p45)	
69 Determination of applications (1) In determining an application for a marine licence (including the terms on which it is to be granted and what conditions, if any, are to be attached to it), the appropriate licensing authority must have regard to— (a) the need to protect the environment, (b) the need to protect human health, (c) the need to prevent interference with legitimate uses of the sea, and such other matters as the authority thinks relevant. (2) In the case of an application for a licence to authorise such activities as are mentioned in item 7 in section 66(1), the appropriate licensing authority must have regard (among	No change

other things) to the effects of any use intended to be made of the works in question when constructed, altered or improved. (3) The appropriate licensing authority must have regard to any representations which it receives from any person having an interest in the outcome of the application. (4) A licensing authority may— (a) from time to time consult any person or body it thinks fit as to the general manner in which the licensing authority proposes to exercise its powers in cases involving any matter in which that person or body has particular expertise; (b) in relation to any particular application, consult any person or body which has particular expertise in any matter arising in relation to that application. (5) If the appropriate licensing authority consults any person or body under subsection (4)(b), it must give the applicant the opportunity to make representations to the licensing authority about any observations made by the person or body. (	

(6) A licensing authority may by regulations make further provision as to the procedure to be followed in connection with— (a) applications to it for marine licences, and (b) the grant by it of such licences. (7) The provision that may be made by virtue of subsection (6) includes (in particular) provision as to— (a) the period within which any function is to be exercised (including when that period is to begin and how it is to be calculated); (b) notifying the applicant of any licensing determination. (p46)	
70 Inquires (1) The appropriate licensing authority may cause an inquiry to be held in connection with the determination of an application for a marine licence (p47)	No change
72 Variations, suspension, revocation and transfer (3) A licensing authority may by notice vary, suspend or revoke a licence granted by it if it appears to the authority that the licence ought to be varied, suspended or revoked – (a) because of a change in circumstances relating to the environment or human health;	No change

(b) because of increased scientific knowledge relating to either of those matter; (c) in the interests of safety of navigation; (d) for any other reason that appears to the authority to be relevant. (p49)	
73 Appeals against licensing decisions (1) The appropriate licensing authority must by regulations make provision for any person who applies for a marine licence to appeal against a decision under section 71. (2) The regulations required by subsection (1) must come into force on the day on which this Part comes into force. (3) Regulations under this section may include— (a) provision as to the procedure to be followed with respect to an appeal; (b) provision for or in connection with suspending or varying any condition subject to which the licence was granted, pending determination of the appeal; (c) provision as to the powers of any person to whom the appeal is made; (d) provision as to how any sum (p50)	Not in Draft
Part 4. Marine Licensing. Chapter 5. Supplementary	
101 Register (1) Each licensing authority must maintain, as respects activities in	No change

relation to which it is the appropriate licensing authority and licences for those activities, a register of licensing information. (p68)	
102 Notice to stop activity causing serious harm etc (4) This subsection is satisfied if the carrying on of the activity to be specified in the notice— (a) is causing, or is likely to cause, any of the effects in subsection (5), or (b) is creating, or is likely to create, an imminent risk of any of those effects. (5) The effects are— (a) serious harm to the environment; (b) serious harm to human health; (c) serious interference with legitimate uses of the sea. (p69)	96 Notice to stop activity causing serious harm etc. (4) This subsection is satisfied if the carrying on of the activity to be specified in the notice— (a) is causing, or will cause, any of the effects in subsection (5), or (b) is creating, or will create, an imminent risk of any of those effects. (5) The effects are – (a) serious harm to the environment; (b) serious harm to human health; (c) serious interference with legitimate uses of the sea.
115 Interpretation of this Part (1) In this Part— “appropriate enforcement authority”, in the case of any area and any provision of this Part, means any authority which is an enforcement authority for that area for the purposes of that provision; “the appropriate licensing authority” has the meaning given by section 113; “British aircraft” means an aircraft registered in the United Kingdom;	104 Interpretation of this Part (1) In this Part— “the appropriate licensing authority” has the meaning given by section 102; “the appropriate enforcement authority” has the meaning given by section 103; “British aircraft” means an aircraft registered in the United Kingdom; “British vessel” means a vessel— (a) which is a British ship within the meaning of the Merchant Shipping Act 1995 (c.21); or

Marine and Coastal Access Act 2009 (c. 23) “British marine structure” means a marine structure owned by or leased to an individual residing in, or a body corporate incorporated under the law of, any part of the United Kingdom; “British vessel” means a vessel— (a) which is registered in the United Kingdom, (b) which falls within section 1(1)(d) of the Merchant Shipping Act 1995 (c. 21) (small ships), or (c) which is exempt from registration under section 294 of that Act; “compliance notice” means a notice issued under section 90; “emergency safety notice” means a notice issued under section 104; “enforcement authority” has the meaning given by section 114; “fixed monetary penalty” has the meaning given by section 93(3); “licensable marine activity” is to be read in accordance with section 66; “licensing authority” means— (a) the Secretary of State; (b) the Welsh Ministers; (c) the Scottish Ministers; (d) the Department of the Environment in Northern Ireland; “marine licence” means a licence granted under this Part;	(b) is exempt from registration under section 294 of that Act, except that it does not include a ship registered under the law of any of the Channel Islands; “British marine structure” means a marine structure owned by or leased to an individual residing in, or a body corporate incorporated under the law of, any part of the United Kingdom; “compliance notice” means a notice issued under section 80; “enforcement undertaking” has the meaning given by section 87(2); “fixed monetary penalty” has the meaning given by section 83(3) “marine licence” means a licence granted under this Part; “licensing authority” mean – (a) the Secretary of State; (b) the Welsh Ministers; (c) the Scottish Ministers; (d) the Department of the Environment in Northern Ireland; “marine structure” means a platform or other artificial structure at sea, other than a pipeline; “remediation notice” means a notice issued under section 81; “stop notice” means a notice issued under section 96; “the UK marine licensing area” has the meaning given by section 101;

“marine structure” means a platform or other artificial structure at sea, other than a pipeline; “remediation notice” means a notice issued under section 91; “stop notice” means a notice issued under section 102; “the UK marine licensing area” has the meaning given by section 66(4); “variable monetary penalty” has the meaning given by section 95(3); “vessel” includes— (a) hovercraft, and (b) any other craft capable of travelling on, in or under water, whether or not self-propelled. (2) In this Part any reference to the environment includes a reference to any site (including any site comprising, or comprising the remains of, any vessel, aircraft or marine structure) which is of historic or archaeological interest.	“variable monetary penalty” has the meaning given by section 85(3); “vessel” includes— (a) hovercraft, and (b) any other craft capable of travelling on, in or under water, whether or not self-propelled. (2) In this Part any reference to the environment includes a reference to any site (including any site comprising, or comprising the remains of, any vessel, aircraft or marine structure) which is of historic or archaeological interest.

Appendix 5C. Comparison between Final and Draft Marine Policy Statement

UK Marine Policy Statement	Wording from Draft
This Marine Policy Statement (MPS) is the framework for preparing Marine Plans and taking decisions affecting the marine environment. (p3)	No change
achieving the vision shared by the UK Administrations … of having 'clean, healthy, safe, productive and biologically diverse oceans and seas'. (p3)	No change
Promote sustainable economic development (p3)	No change
Ensure a sustainable marine environment which promotes healthy, functioning marine ecosystems and protects marine habitats, species and our most important heritage assets; (p3)	No change
Contribute to the societal benefits of the marine area, including the sustainable use of marine resources to address local social and economic issues. (p3)	No Change
Recognise that the demand for use of our seas, and the resulting pressures on them, will continue to increase; Manage competing demands on the marine area, taking an ecosystem-based approach; Enable the co-existence of compatible activities wherever possible; and Integrate with terrestrial planning. (p4)	No Change

The Marine and Coastal Access Act 2009 requires all public authorities taking authorisation or enforcement decisions that affect or might affect the UK marine area to do so in accordance with the MPS and relevant Marine Plans unless relevant considerations indicate otherwise.	No change
The MPS will remain in place until it is withdrawn, amended or replaced. As set out in the Marine and Coastal Access Act 2009, it will be reviewed as and when the relevant policy authorities (the Secretary of State in conjunction with devolved authorities) consider it appropriate to do so. (p4)	No change
A practical interpretation of the ecosystem approach is set out in regulation 5 of the draft regulations transposing the Marine Strategy Framework Directive. An ecosystem based approach to the management of human activities means an approach which ensures that the collective pressure of human activities is kept within the levels compatible with the achievement of good environmental status; that does not compromise the capacity of marine ecosystems to respond to human-induced changes; and that enables the sustainable use of marine goods and services. (p4fn)	No change

The MPS and Marine Plans form a new plan-led system for marine activities. They will provide for greater coherence in policy, and a forward-looking, proactive and spatial planning approach to the management of the marine area, its resources, and the activities and interactions that take place within it. (p7)	No change
The MPS does not provide specific guidance on every activity which will take place in, or otherwise affect, UK waters. (p7)	No change
The MPS and marine planning systems will sit alongside and interact with existing planning regimes across the UK. These include town and country planning and other legislation, guidance and development plans in each Administration. In England and Wales this also includes the development consent order regime for nationally significant infrastructure projects (NSIPs). (p8)	No change
In England and Wales, consents for nationally significant infrastructure projects, including the larger offshore renewable energy and port developments, need to be determined in accordance with the Planning Act 2008. (p8)	No change
Integration of marine and terrestrial planning will be achieved through:	No change

• Consistency between marine and terrestrial policy documents and guidance. (p9)	
The coast and estuaries are highly valued environments, as well as socio-economic assets. The UK Administrations are committed to ensuring that coastal areas, and the activities taking place within them, are managed in an integrated and holistic way in line with the principles of Integrated Coastal Zone Management (ICZM). (p9)	No change
The UK vision for the marine environment is for 'clean, healthy, safe, productive and biologically diverse oceans and seas'. (p10)	No change
The process of marine planning will contribute to the achievement and integration of sectoral/ activity specific policy objectives within a framework of economic, social and environmental considerations in order to deliver the high level marine objectives. This approach will help ensure the sustainable development of the UK marine area and deliver the UK vision. (p10)	The process of marine planning will integrate delivery of the high level marine objectives alongside the achievement of sectoral/ activity specific policy objectives. This approach will help ensure the sustainable development of the UK marine area and deliver the UK vision.
Box 1: The high level marine objectives Achieving a sustainable marine economy	No change

• Infrastructure is in place to support and promote safe, profitable and efficient marine businesses. • The marine environment and its resources are used to maximise sustainable activity, prosperity and opportunities for all, now and in the future. • Marine businesses are taking long-term strategic decisions and managing risks effectively. They are competitive and operating efficiently. • Marine businesses are acting in a way which respects environmental limits and is socially responsible. This is rewarded in the marketplace. Ensuring a strong, healthy and just society • People appreciate the diversity of the marine environment, its seascapes, its natural and cultural heritage and its resources and act responsibly. • The use of the marine environment is benefiting society as a whole, contributing to resilient and cohesive communities that can adapt to coastal erosion and flood risk, as well as contributing to physical and mental wellbeing. • The coast, seas, oceans and their resources are safe to use.	

• The marine environment plays an important role in mitigating climate change. • There is equitable access for those who want to use and enjoy the coast, seas and their wide range of resources and assets and recognition that for some island and peripheral communities the sea plays a significant role in their community. • Use of the marine environment will recognise, and integrate with, defence priorities, including the strengthening of international peace and stability and the defence of the UK and its interests. Living within environmental limits • Biodiversity is protected, conserved and where appropriate recovered and loss has been halted. • Healthy marine and coastal habitats occur across their natural range and are able to support strong, biodiverse biological communities and the functioning of healthy, resilient and adaptable marine ecosystems. • Our oceans support viable populations of representative, rare, vulnerable, and valued species. Promoting good governance	

• All those who have a stake in the marine environment have an input into associated decision-making. • Marine, land and water management mechanisms are responsive and work effectively together, for example through integrated coastal zone management and river basin management plans. • Marine management in the UK takes account of different management systems that are in place because of administrative, political or international boundaries. • Marine businesses are subject to clear, timely, proportionate and, where appropriate, plan-led regulation. • The use of the marine environment is spatially planned where appropriate and based on an ecosystems approach which takes account of climate change and recognises the protection and management needs of marine cultural heritage according to its significance. Using sound science responsibly • Our understanding of the marine environment continues to develop through new scientific and socio-economic research and data collection. • Sound evidence and monitoring underpins effective marine management and policy development.	

• The precautionary principle is applied consistently in accordance with the UK Government and devolved administrations' sustainable development policy. (p11)	
Enforcement or authorisation decisions that affect or might affect the UK marine area must be made in accordance with the relevant marine policy documents unless relevant considerations, such as advances in scientific knowledge and technology for example, indicate otherwise. This means that decisions on activities in the UK marine area will be plan led once Marine Plans are in place. In the interim, decisions must be made in accordance with the MPS. (p13)	Enforcement or authorisation decisions must be made in accordance with the relevant marine policy documents unless relevant considerations (e.g. advances in scientific knowledge and technology) indicate otherwise. This means that decisions on activities in the UK marine area will be plan led once Marine Plans are in place. In the interim, decisions must be made in accordance with the MPS.
weigh the potential benefits and adverse effects of each proposal, drawing on different, identifiable lines of evidence to consider the different impacts of a proposal. (p13)	No change
The level of assessment undertaken for any project should be proportionate to the scale and impact of the project as well as the sensitivity of the environment concerned and in accordance with the Environmental Impact Assessment (EIA) Directive (Directive 85/337/EEC) where applicable (p13)	No change
There are a number of principles that should also be taken into account, specifically that	All the same except:

decisions should: • Be based on the detailed information and advice in the relevant marine policy documents in the respective Administrations; • Be conducted in a manner that meets requirements under UK and EU legislation and is consistent with our obligations under international law; • Be conducted in a way that takes into account all of the relevant UK Administrations' policy objectives affecting the marine area; • Be conducted in a manner that takes account of other relevant projects, programmes, plans and national policies33 and guidance; • Be taken after appropriate liaison with terrestrial planning authorities and other regulators, and in consultation with statutory and other advisors when appropriate; • Be streamlined where possible, making effective use of existing data;	
• Be taken using a risk-based approach that allows for uncertainty, recognising the need to use sound science responsibly34 as set out in the high level objectives; • Be sensitive to any potential impacts on sites of particular significance including those;	• Be sensitive to any potential impacts on sites of particular significance – including sites designated in relation to environmental protection or marine heritage assets, otherwise significant in terms of environmental concerns, or of particular socio-economic interest;

protected under environmental legislation or designated in relation to cultural heritage; of particular social or economic significance; • Take account of potential impacts of climate change mitigation and adaptation in individual applications to ensure that any appropriate adaptation and mitigation measures have been identified; • Take account of the benefits that good design (including the best use of available technologies and innovation) can deliver; and • Look to avoid and then mitigate negative impacts where possible at various stages of development, including appropriate conditions in line with legal obligations, in a manner that is proportionate to the potential impacts of the proposal under consideration. Where alternative site selection or design could mitigate negative effects whilst retaining benefits, this should be considered, where appropriate. (p4)	
The marine plan authority will need to consider the potential cumulative impact of activities and whether for example: • The cumulative impact of activities, either by themselves over time or in	No change

conjunction with others, outweigh the benefits; • A series of low impact activities would have a significant cumulative impact which outweighs the benefit; • An activity may preclude the use of the same area/resource for another potentially beneficial activity. (pp14)	
Economic and social considerations 2.5.2 Properly planned developments in the marine area can provide environmental and social benefits as well as drive economic development, provide opportunities for investment and generate export and tax revenues. The marine planning system will help to promote these benefits in contributing to the achievement of sustainable development. There will therefore be a presumption in favour of sustainable development in the marine planning system. 2.5.3 Marine based activities can provide opportunities for employment in long established industries such as fishing, marine transport, port related storage and processing, oil and gas production and new and developing industries such as the renewable energy sector and associated offshore electricity transmission. This employment provides wide and long	2.5 Economic and social considerations Activities in the marine area and associated activities on the coast contribute substantially to the UK economy and quality of life. There will therefore be a presumption in favour of sustainable development in the marine planning system. Activities in the marine area provide significant social and economic benefits and can drive economic growth, provide opportunities for investment and generate export and tax revenues. They also provide opportunities for employment, both in long established industries such as fishing, marine transport and port related storage and processing; as well as new and developing industries such as the renewable energy sector and associated offshore electricity transmission. This employment provides wider and longer term benefits for both national and local economies.

term benefits for both national and local economies. (p15)	
2.5.4 The marine environment provides national economic and social benefits including for heritage assets, seascape and cultural services of coastal and marine activities, as well as directly contributing to the quality of life and well being of coastal communities. Marine planning will also therefore make an important contribution towards ensuring vibrant and sustainable coastal communities - helping to build strong local economies - improving quality of life, access to, and enjoyment of, their marine areas. (p16)	Marine planning will also play an important role in improving the quality of life for communities by building strong local economies and improving access to, and enjoyment of, their marine areas. Optimising the potential of environmental resources to support sustainable social, cultural and economic activity can benefit local communities as well as the national economy. Marine planning will therefore help support local economies sustain cultural heritage and improve access to, and enjoyment of, the marine area thereby improving quality of life.
Environmental considerations 2.5.8 The UK's marine environment is extremely rich and varied, supporting a wide range of species of national and international importance. It provides vital ecosystem goods and services including provision of food and regulation of the climate. A healthy marine ecosystem is fundamental to supporting sustainable development, thus ensuring wide social and economic benefits. (p16)	2.6 Marine environment A healthy marine ecosystem is fundamental to supporting sustainable development, thus ensuring wide social and economic benefits.
2.6 Detailed considerations	Reworked and expanded

The following sections may have social, economic and/or environmental implications that will need to be considered within individual Marine Plans. (p18)	
Seascape moved above historic Environment (p21)	
2.6.5. Seascape There is no legal definition for seascape in the UK but the European Landscape Convention (ELC) defines landscape as “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”. In the context of this document, references to seascape should be taken as meaning landscapes with views of the coast or seas, and coasts and the adjacent marine environment with cultural, historical and archaeological links with each other. (p21)	No change
In considering the impact of an activity or development on seascape, the marine plan authority should take into account existing character and quality, how highly it is valued and its capacity to accommodate change specific to any development. Landscape Character Assessment methodology may be an aid to this process. (p21)	No change
2.6.6 Historic environment	No change

2.6.6.1 The historic environment includes all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged. Those elements of the historic environment – buildings, monuments, sites or landscapes – that have been positively identified as holding a degree of significance53 meriting consideration are called ‘heritage assets’. (p21)	
Significance is the value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. (p21fn)	Fn: Significance is the value of a heritage asset to this and future generations because of its heritage interests.
The historic environment of coastal and offshore zones represents a unique aspect of our cultural heritage. In addition to its cultural value, it is an asset of socio-economic and environmental value. (p21)	No change
heritage assets are a finite and often irreplaceable resource and can be vulnerable to a wide range of human activities and natural processes. (p21)	No change
Opportunities should be taken to contribute to our knowledge and understanding of our past by capturing evidence from the historic environment and making this publicly available,	No change

particularly if a heritage asset is to be lost. (pp21)	
In considering the significance of heritage assets and their setting, the marine plan authority should take into account the particular nature of the interest in the assets and the value they hold for this and future generations. (p22)	No change
The more significant the asset, the greater should be the presumption in favour of its conservation. Substantial loss or harm to designated assets should be exceptional, and should not be permitted unless it can be demonstrated that the harm or loss is necessary in order to deliver social, economic or environmental benefits that outweigh the harm or loss. (p22)	The more significant the asset, the greater should be the presumption in favour of its conservation. Substantial loss or harm to designated assets should be exceptional, and should not be permitted unless it can be demonstrated that the harm or loss is necessary in order to deliver social, economic or environmental benefits that outweigh the harm or loss. Where loss or harm is to be accepted, appropriate mitigation should be considered.
Where the loss of the whole or a material part of a heritage asset's significance is justified, the marine plan authority should identify and require suitable mitigating actions to record and advance understanding of the significance of the heritage asset before it is lost. Requirements should be based on advice from the relevant regulator and advisors (p22)	When considering developments that affect the setting of a heritage asset, the marine plan authority should treat favourably those that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset. When considering activities that do not do this, it should weigh any such harm against the wider benefits.

This Chapter sets out the policy objectives for the key activities that take place in the marine environment. These objectives are the specific policy outcomes which the UK Government, Scottish Government, Welsh Assembly Government and Northern Ireland Executive are seeking to achieve through the sustainable development of the UK marine area in order to deliver the vision set out in Chapter 2. They will be delivered through marine planning and the decision making approach and framework of environmental, social and economic considerations outlined in Chapter 2. Marine Plans should align with, and contribute to, the delivery of these objectives. This Chapter also provides guidance on the pressures and impacts associated with these activities, which will need to be considered when planning for and permitting development in the UK marine area. (p26)	This Chapter sets out the policy objectives for the key activities that take place in the marine environment. These objectives are the outcomes which the UK Government, Scottish Government, Welsh Assembly Government and Northern Ireland Executive are seeking to achieve through the sustainable development of the UK marine area. They will be delivered through the marine planning and decision making approaches outlined in Chapter 2. Marine Plans should align with, and contribute to the delivery of these objectives. This Chapter also provides guidance on the pressures and impacts associated with these activities, which will need to be considered when planning for and permitting development in the UK marine area.
Chapter 2 explains the context and considerations which must be taken into account in developing Marine Plans, thus setting the framework within which Marine Plans must be developed. These considerations include high level principles for marine planning, such as promoting compatibility and encouraging co-existence between different activities, application of the ecosystem based	Not in Draft

approach and integration with terrestrial planning. The context and considerations are also relevant when making decisions. They include key social, economic and environmental considerations that marine plan authorities and decision makers should take into account. The policy objectives below must be taken into account within this framework. (p26)	
3.1.1 Marine Protected Areas The UK Administrations recognise the economic, social and intrinsic value of a healthy marine environment and are committed to halting the loss of biodiversity and restoring it so far as is feasible – this means a “no net loss” approach to biodiversity. (p26)	No change
3.2 Defence and National Security 3.2.1 The primary objective of the Ministry of Defence (MoD) is to provide military defence and, where appropriate, security for the people of the UK and Overseas Territories. UK waters are a crucial environment in which MoD (including HM Armed Forces and the Royal Fleet Auxiliary) must maintain and deploy the operational capability required to achieve this. The MoD has the power to regulate sea areas and restrict their use either temporarily or permanently by making byelaws under the provisions of the Military Lands Acts	3.2 Defence and National Security The marine and coastal environment is essential to MoD (including HM Armed Forces and the Royal Fleet Auxiliary) in maintaining the operational capability required to achieve this. The MoD has the power to regulate sea areas and restrict the use of them either temporarily or permanently by making byelaws under the provisions of the Military Lands Acts 1892 and 1900 and the Land Powers Defence Act 1958.

1892 and 1900 and the Land Powers Defence Act 1958. (p28)	
Marine activities should not prejudice the interest of defence and national security and the MoD should be consulted accordingly (p28)	Marine activities should not prejudice the interest of defence and national security. In case of doubt the MoD should be consulted.
The socio-economic benefits from the defence sector should be recognised within marine policy and planning, particularly employment. In some coastal locations, the MoD is the major employer in the region. (p29)	The socio-economic benefits from the sector should be recognised within marine policy and planning, particularly employment. In some coastal locations, the MoD is the major employer in the region.
Marine planners, decision makers and developers should consult the MoD in all circumstances to verify whether defence interests will be affected. (p29)	No change
3.3 Energy production and infrastructure Development 3.3.1. A secure, sustainable and affordable supply of energy is of central importance to the economic and social well being of the UK. The marine environment will make an increasingly major contribution to the provision of the UK's energy supply and distribution. (p29)	No change
Much of the renewable energy required to meet these targets and objectives will come from marine sources. (p29)	No change
The positive wider environmental, societal and economic benefits of low carbon electricity generation and carbon	No change

capture and storage as key technologies for reducing carbon dioxide emissions; (p30)	
The potential impact of inward investment in offshore wind, wave, tidal stream and tidal range energy related manufacturing and deployment activity; as well as the impact of associated employment opportunities on the regeneration of local and national economies. (p30)	No change
From these studies, it was concluded that there are no overriding environmental reasons to prevent the achievement of our current assessed plans for offshore wind and sub-sea grid development, if mitigation measures are implemented to prevent, reduce and offset any significant adverse effects. (pp32)	No change
In addition there are a number of potentially significant socio-economic benefits from the sector including employment opportunities, export business and energy security. As yet, the potential for benefits such as introduction of artificial reef structures, which can yield biodiversity benefits and fishing opportunities around wind farm sites, have not been fully explored. (p34)	No change
3.3.24 Renewable energy developments can potentially have adverse impacts on	For marine fish and mammals one of the greatest potential adverse effects

marine fish and mammals, primarily through construction noise and may displace fishing activity and have direct or indirect impacts on other users of the sea, including mariners. Certain bird species may be displaced by offshore wind turbines, which also have the potential to form barriers to migration or present a collision risk for birds. Their foundation designs are likely to have an effect on hydrodynamics and consequent sediment movement. This includes potential scouring of sediments around the bases of turbines. These and other potential adverse impacts, together with potential mitigation measures, are considered in the National Policy Statement for Renewable Energy Infrastructure (EN-3) (p34)	from marine renewable energy is from construction noise. Of greatest concern are behavioural effects caused by intermittent but prolonged (over several years) noise inputs that could disturb organisms from migration routes, breeding and feeding grounds. Research is ongoing to try to better determine the nature and scale of such effects and the efficacy of mitigation measures. There are also potential socio economic impacts through displacement of fishing activity, particularly on some smaller vessels which do not have capacity to shift activity to other fishing grounds.
There are obvious socio-economic benefits from such an increase in network capacity, most notably the facilitation of marine renewable energy. There are also socio-economic risks associated with such an increase in underwater cabling, which may affect activities such as dredging and the use of certain fishing gear, and impact on other sea users, including existing cable and pipeline operators. (p35)	No change
3.4.7 Increased competition for marine resources may affect the sea space	Increased competition for marine resources may affect the sea space

available for the safe navigation of ships. Marine plan authorities and decision makers should take into account and seek to minimise any negative impacts on shipping activity, freedom of navigation and navigational safety and ensure that their decisions are in compliance with international maritime law. Marine Plan development and individual decisions should also take account of environmental, social and economic effects and be in compliance with international maritime law. Marine plan authorities will also need to take account of the need to protect the efficiency and resilience of continuing port operations, as well as further port development. (p37)	available for the safe navigation of ships. Marine planning or decision making on an individual application which impacts on shipping activity should take account of environmental, social and economic effects and be in compliance with international maritime law.
Relevant national planning policy documents indicate the overall national level of need for port development based on port forecasts in the context of a market-led sector (p37)	Relevant national planning policy documents set out the level of need for larger scale port development based on port forecasts
In England and Wales the National Policy Statement for Ports (expected to be published during 2011). In Scotland National Planning Framework 2 identifies a number of port and related proposals as National Developments. Projects such as Scotland's national renewable infrastructure plan also identify ports and infrastructure for	The same except date

supporting the development of marine renewable projects. (p37fn)	
Positive impacts from port development include job creation and benefits to local fishermen, as well as wider benefits to national, regional or local economies. (p38)	No change
The UK has some of the best marine aggregate resources in the world. Marine sand and gravel makes a crucial contribution to meeting the nation's demand for construction aggregate materials, essential for the development of our built environment. (p38)	No change
The extraction of marine dredged sand and gravel should continue to the extent that this remains consistent with the principles of sustainable development, recognising that marine aggregates are a finite resource and in line with the relevant guidance and legislation. (p39)	The extraction of marine dredged sand and gravel should continue to the extent that this remains consistent with the principles of sustainable development and in line with the relevant guidance and legislation.
Reference to guidance documents removed (p39)	Fn: For example Marine Minerals Guidance 1, ODPM (2002); Minerals Policy Statement 1: Planning and Minerals, DCLG (2006); Marine Minerals Guidance 1 (Northern Ireland) 2007
Marine plan authorities and decision makers should base decisions on sustainability criteria and should take into account the existing sea bed within the marine plan area that is currently being dredged; offshore movement of	The assessment by the decision maker should be based on sustainability criteria and should take into account the existing sea bed within the Marine Plan area that is currently being dredged; offshore movements of

aggregates; the importance of meeting regional and national needs, beach replenishment and contract fill; and the need to safeguard reserves for future extraction. (p39)	aggregates; the importance of meeting regional and national needs, beach replenishment and contract fill; and the need to safeguard reserves for future extraction.
A marine licence or other regulatory approval to dredge should only be issued if the decision maker is content that the proposed dredging is environmentally acceptable. (p39)	A permission to dredge should only be issued if the marine plan authority is content that the proposed dredging is environmentally acceptable.
Dredging is an enabling activity which is essential to the functioning of ports and marinas (see section 3.4) and the social and economic benefits which derive from these. It can also allow specific construction activities to be taken forward. (p40)	The same except ref to 3.4
Submarine cables are part of the backbone of the world's power, information and international telecommunications infrastructure, and socially and economically crucial to the UK. (p41)	No change
The sea can provide a variety of tourism and recreational opportunities. These will vary from area to area but will include pleasure boating, sailing, recreational diving (including diving on wrecks), sea angling, kayaking and surfing, as well as exploration of underwater and coastal heritage assets. The coast also provides inspiration for a range of artistic and cultural activities	The sea can provide a variety of recreational opportunities including pleasure boating, sailing diving, sea angling and surfing as well as wildlife Experiences

and food-based tourism. There is also growing interest in eco-tourism and wildlife experiences (p46)	
All these activities can generate a considerable amount of income for the economy and can be a mainstay for many coastal towns, supporting their quality of life, and providing health and well being benefits, with many local businesses relying on the marine environment for their livelihoods. (p46)	Outdoor recreation on the coast also provides physical and mental well being benefits.
These activities will be enhanced by a well-managed and healthy marine environment, attractive and well-maintained beaches, seashore and clean bathing water. (p46)	Good access to the coastline, to attractive and well-maintained beaches, seashore and clean bathing water quality are an essential part of tourism.
Tourism can provide environmental benefits through helping to enhance understanding and appreciation of the marine environment through activities such as eco-tourism and nature watching. Environmental effects/impacts may include the removal of marine fauna and flora, the physical or visual disturbance of wildlife, pollution from waste water and litter and pressures from increased visitor numbers in environmentally sensitive areas. Socio-economic benefits include positive economic benefits through increased visitor numbers and improved access. Outdoor recreation and enjoyment of the	The use of the marine area for tourism can impact on its ability to be used for other activities and vice versa. Environmental effects/impacts may include the removal of marine fauna and flora, the physical or visual disturbance of wildlife, pollution from wastewater and litter. Socio-economic benefits include the positive benefits to local communities through increased visitors and tourism. Improving access may also attract more visitors.

coast can also provide benefits to physical and mental well being. (p46)	
3.11.5 Marine plan authorities and decision makers should consider the potential for tourism and recreation in the marine environment and the benefits that this will bring to the economy and local communities. These activities, especially recreation, are likely to be varied and many will be closely linked to onshore tourism strategies and plans which will need to be taken into account. The provision of slipways, coastal footpaths and ensuring coastal access for example could encourage economic growth and highlights the importance of considering the links between marine and terrestrial plans. There may also be opportunities for raising environmental awareness amongst coastal users. 3.11.6 In weighing up these considerations it will be important to ensure that local authorities, local tourism stakeholders, tourism destination management organisations, water based sports organisations and other marine and coastal users are engaged and consulted before decisions are taken. (p46)	Decision makers should consider the potential for tourism and recreation in the marine environment and consider the likely implications on other activities, both in the marine environment and on shore. Many of these activities will be closely linked to onshore tourism strategies and plans which will need to be taken into account. It will be important to ensure that local authorities, local tourism stakeholders and other marine users are engaged and consulted during the plan making process and before decisions are taken.
Conclusion This document provides the framework for marine planning and taking decisions	Not in Draft

affecting the UK marine area. It outlines the UK Administrations' vision for the UK marine area, general principles for decision making and the high level approach to marine planning that will contribute to delivering this vision and so achievement of sustainable development. It sets out the environmental, social and economic considerations that need to be taken into account. It also sets out the policy objectives for the key activities taking place in the marine environment. These objectives are the policy specific outcomes which the UK Administrations are seeking to achieve through the sustainable development of the UK marine area. Marine Plans will need to align with and contribute to delivery of these objectives, and marine plan authorities and decision makers will need to consider pressures and impacts associated with these activities. The UK Administrations will ensure that the MPS is reviewed where circumstances indicate this is necessary. (p47)	

Appendix 5D. Marine Licence Exempted Activities

Activity	Details
1. No Notification Required	
Activities falling within Part 6 of the Merchant Shipping Act 1995 (2011, 7)	deposit of oil or mixtures containing oil deposit or incineration of garbage originating in or on the vessel deposit of cooling water or ballast water
Safety directions under the Merchant Shipping Act 1995 (2011, 8)	
Salvage (2011, 9)	for the purpose of ensuring the safety of a vessel preventing pollution
Firefighting (2011, 10)	
Air accident investigation (2011, 11)	
Fishing operations (2011, 12)	Disposal of fishing gear (other than for the purpose of disposal) Removal or dredging activity for the purpose of fishing or taking fish Removal of fishing gear Deposit by way of return to the sea, of any fish or other object
Deposit of equipment to control, contain or recover oil, mixtures containing oil, chemicals, flotsam or algal blooms (2011, 16)	
Deposits in the course of aggregates or mineral dredging (2011, 18)	such as old munitions, litter or other bulky items (shore side recycling is strongly encouraged) Discharge of water
Maintenance of coastal protection, drainage and flood defence works (2011,19)	within existing boundaries Does not include beach replenishment
Deposits in the course of normal navigation (2011, 22)	Deposits of anchors mandatory testing of fire-fighting equipment Propeller polishing

Maintenance of harbour works (2011, 23)	Deposit, removal or works carried out by or on behalf of a harbour authority Within the existing boundaries of the works being maintained
Removal of obstruction or danger to navigation (2011, 24)	By a Conservancy agency, harbour authority, lighthouse authority etc.
Launching of vessels (2011, 27)	Including vehicle, vessel, aircraft, marine structure or floating container Vessel includes Hovercraft and any other craft capable of travelling on, in, or under water, whether or not self-propelled Marine structure means a platform or other artificial structure at sea, other than a pipeline
Dismantling of ships (2011, 28)	
Scheduled works under the Crossrail Act 2008 (2011, 29)	
Licence deep sea mining (2011, 30)	Regulated under Deep Sea Mining (Temporary Provisions) Act 1981
Diver trails within restricted areas (2011. 31)	Placing, securing or removing signage or other markers for divers on wrecks protected under the Protection of Wrecks Act 1973 (Historic England approval required)
Coastguard activities – safety purposes and training (2011, 32)	
Flares and other such items for safety purposes and training (2011, 33)	
Defence Activities (2011, 36)	Operational activities by naval ships Weapons firings from land-based equipment and systems Activities in direct support of training by UK armed forces of Royal Fleet artillery Tests and trials of defence equipment and systems Recovery of defence assets

	"The Royal Navy occasionally sinks a redundant vessel in what is known as a "SINKEX" exercise. This involves disposal of waste and is not exempt from licensing"
Rights of foreign vessels under international law (2011, 37)	

2. Notification Required

Shellfish propagation and cultivation (2011, 13)	deposit and removal of any shellfish, trestle, cage, pole, rope, marker or line the deposit is not for the purpose of disposal the deposit is not for the purpose of creating, altering or maintaining a reef the deposit does not cause or is not likely to cause obstruction or danger to navigation Does not apply to construction activities (for example digging a trench or building a jetty to access shellfish beds Does not apply to the use of artificial reefs in shellfish propagation and cultivation
Scientific instruments (2011, 17)	deposit scientific instruments or associated equipment in connection with any scientific experiment or survey at sea (or to subsequently remove it) Tracers (Chemical dyes, Microbial tracers, Particle tracers) included on the MMO's approval list Not for the purposes of disposal The deposit does not cause or is not likely to cause obstruction or danger to navigation The activity must not be likely to have a significant effect on a marine protected area Must not be related to construction work Must not include dredging

Samples for testing and analysis (2013, 17A)	The volume is less than 1m3 The deposit is not for the purpose of disposal The deposit does not cause or is not likely to cause obstruction or danger to navigation The activity must not be likely to have a significant effect on a marine protected area
Accidental deposits (2013, 17B)	“his exemption is intended to allow the removal of objects including but not limited to, lost anchors, rock and equipment” Removal is within 12 months of the deposit The deposit does not cause or is not likely to cause obstruction or danger to navigation The activity must not be likely to have a significant effect on a marine protected area
Navigational dredging (2013, 18A)	Dredging activity must have occurred at the site in question and be to a depth previously dredged within the last 10 years Volume does not exceed 500m3 No more than 1500m3 of material has been dredged (including volume to be dredged) in the previous 12 months The activity is not likely to affect the status of the waterbody or prevent the achievement of any environmental objectives listed in the relevant River Basin Management plan The deposit does not cause or is not likely to cause obstruction or danger to navigation The activity must not be likely to have a significant effect on a marine protected area Does not include disposal of dredged material at sea

Use of vehicles to remove litter, seaweed or dead animals (2013, 21)	If activity is carried out by or on behalf of a local authority Notification only required for dead animal removal The activity must not be likely to have a significant effect on a marine protected area
Moorings and aids to navigation (2013, 25)	Carried out by harbour authorities and lighthouse authorities The deposit or removal of piled or swinging/trot moorings or aids to navigation (such as marker buoys) Does not apply to the deposit or construction of pontoons
Pontoons (2013, 25A)	Carried out by harbour authorities or with consent from harbour authorities The pontoon deck size does not exceed 30m2 where the activity relates to deposit or construction (or associated works activity) - in the six months before the proposed activity, no more than 10 pontoons have been constructed or deposited by, or with the consent required from and granted by, the relevant harbour authority in the event that more than 10 pontoons have been constructed or deposited within the period specified, the activity, in so far as it relates to deposit or construction (or associated works activity), must only be carried out with approval from the MMO
Temporary markers (2013, 26A)	Deposit and subsequent removal of marker

	The marker and associated items are removed within 28 days of the day of its deposit The deposit does not cause or is not likely to cause obstruction or danger to navigation The activity must not be likely to have a significant effect on a marine protected area
Bored tunnels (2011, 35)	Carried out wholly under the seabed Does not apply to deposit of material for the purpose of disposal Does not apply to activities that take place on the sea bed or in the sea The construction of the tunnel does not adversely affect the environment of the UK marine area or the living resources that it supports

3. Approval Required

Deposit of marine chemical and marine oil treatment substances (2011, 15)	Use of products which disperse or treat oil spills Use of products that treat chemical pollution Use of products to tackle fouling or the sea or seabed The substance used must be approved by MMO
Emergency works in response to flood or flood risk (2011, 20)	Carried out by or on behalf of the Environment Agency Imminent risk of flooding “emergency” has been defined by the MMO as imminent risk to human health, property or the environment

Markers for European marine sites and marine conservation zones (2011, 26)	Markers placed by Natural England and removal of such markers Markers placed by a public authority and removal of such markers
Cables and pipelines – authorised emergency repair and inspection (2011, 34)	“emergency” has been defined by the MMO as imminent risk to human health, property or the environment

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Appendix 6. Marine Licence Application Case Example Data Tables

Table A6.1 Case Example Activities and Descriptions

Ref	Fee Band	App Number	Title	Year	Activities	Inshore/ Offshore	Description of works
1.BAS	1	MLA/2017/00228	burial at sea - Mr Patrick Hatchard	2017	Burial at sea	Inshore	Burial at sea
1.BB	1	MLA/2016/00077/5	Component exchanges (maintenance) at Burbo Bank offshore wind farm	2016	Maintenance of existing works	Offshore	Component Exchanges at offshore wind farm
1.BL	1	MLA/2017/00503	Bognor Regis - Barrack Lane (self service licence)	2017	Maintenance of existing works	Inshore	Repair and replace part of existing marker at surface water outfall discharge pipe
1.IW	1	MLA/2015/00315/1	Imperial Wharf	2015	Maintenance of existing works	Inshore	Concrete repairs to jetty
1.LF	1	MLA/2016/00249	Lost Frontiers - DNA of North Sea	2016	Sampling (two activities)	Offshore	Up to 20 5m vibro-core samples
1.OP	1	MLA/2015/00448	Marine Growth Removal at Ormonde Pontoon, Ramsden Dock	2015	Other removals	Inshore	Marine growth removal from pontoon
1.WID	1	MLA/2015/00241	Emergency Dredging Application at West India Dock	2015	Navigational dredging (maintenance)	Inshore	Water injection dredging to Dock entrance. Emergency application to ensure navigational safety
1.WR	1	MLA/2016/00237/1	Wandle River Wall SI Works	2016	Other works	Inshore	Site investigations to river wall flood defence

							including core samples and trial pits
2a.AQ	2a	MLA/2017/00027	Appledore Quay signs and new mooring anchors	2017	Construction of new works	Inshore	Construction of new mooring rings and affixing signs into quay side wall
2b.HW	2b	MLA/2017/00018	Hamford Water, Walton-on-the-Naze | Surface Water Outfall Headwall	2017	Construction of new works	Inshore	Construction of surface water outfall headwall to service new housing scheme
2b.RDT	2b	MLA/2015/00172/1	Release of Rhodamine Dye Tracer	2015	Use of tracers	Inshore	4 releases of Rhadamine dye in Mersey estuary to provide calibration data for coastal dynamic modelling
2c.CQP	2c	MLA/2015/00263	Repairs to damaged/corroded quayside piles	2015	Maintenance of existing works	Inshore	Replacement of damaged pile and stabilisation of quayside road
2c.KPS	2c	MLA/2017/00312	Keadby Power Station Intake & Outfall Dredging	2017	Clean-up dredging	Inshore	Dredging of silt from cooling water intake and outfall pipes
2c.PBA	2c	MLA/2015/00282/2	Pontoon for boat access, Wivenhoe, Colne Estuary	2015	Construction of new works	Inshore	Installation of a pontoon to provide access to existing slipway on the River Colne, Wivenhow, Essex

2d.CWN	2d	MLA/2015/00318	cargo off wk neppo	2015	Wrecks and other archaeological remains	Offshore	Removal of cargo from The MS Neppo - British Cargo vessel lost at sea 8/10/1924
2d.QM	2d	MLA/2017/00130	Quayside Marina Hoist Dock	2017	Construction of new works	Inshore	Installation of a hoist dock to allow for the removal of vessels from the water at Quayside Marina, Southampton
2e.BH	2e	MLA/2015/00044/1	Bembridge Harbour Maintenance Dredging	2015	Navigational dredging (maintenance) (two activities); Disposal of dredged material	Inshore	Continuance of maintenance dredging at Bembridge Harbour
2e.BSD	2e	MLA/2017/00095/1	Bedhampton Silt Disposal	2017	Disposal of dredged material	Offshore	Disposal at sea, to Nab Tower disposal site, of silt originating from the marine aggregate processing facility in Langstone Harbour
2e.GG	2e	MLA/2016/00127	Greater Gabbard Offshore Wind Farm Met Mast IGMMX Removal of lattice	2016	Other works	Offshore	Removal of lattice tower of met mast due to structural design issue
2e.RPW	2e	MLA/2017/00118/1	Rooswijk Protected Wreck Site, Archaeological Excavation	2017	Wrecks and other archaeological remains	Offshore	Archaeological excavation of the wreck 'Rooswijk'

			and Preservation				
3.ASP	3	MLA/2015/00433/1	ABLE SEATON PORT QUAY 6 COFFERDAM REMOVAL	2015	Decommissioning of works	Inshore	Removal of cofferdam as part of wider construction works due to expiration of extant FEPA Licence
3.GS	3	MLA/2016/00168/2	Gunfleet Sands 3 Offshore Wind Farm O&M Marine Licence	2016	Other removals; Maintenance of existing works (5 activities)	Offshore	Operational and Maintenance activities over the lifetime of the windfarm
3.SF	3	MLA/2017/00125/1	Shell Flat Met Masts Decommissioning Project	2017	Decommissioning of works (2 activities)	Offshore	Removal of 2 met masts at proposed offshore wind farm location at end of design life
3.SSP	3	MLA/2017/00330	Managed Breach of Shingle Spit at Pagham	2017	Other works (3 activities); Construction of new works; Maintenance of existing works	Inshore	Shoreline adjustment to address coastal erosion, amenity and human health problems

Table A6.2 Case Example Submission, Determination and Licence Dates

Ref	Submission Date	Determination Date	Weeks and Days	Licence Start	Licence End	Self Service (Y/N)	EIA (Y/N)
1.BAS	14/06/2017	23/06/2017	1 weeks, 3 days	23/06/2017	23/08/2017	No	
1.BB	25/02/2016	16/03/2016	3 weeks, 0 days	18/03/2016	31/10/2016	No	
1.BL	11/12/2017	11/12/2017	0 weeks, 1 days	11/12/2017	10/12/2018	Yes	
1.IW	22/07/2015	04/09/2015	6 weeks, 3 days	04/09/2015	04/01/2016	No	
1.LF	02/06/2016	11/08/2016	10 weeks, 1 days	09/08/2016	30/03/2017	No	
1.OP	10/11/2015	04/12/2015	3 weeks, 4 days	04/12/2015	30/06/2016	No	
1.WID	26/05/2015	29/05/2015	0 weeks, 4 days	30/05/2015	30/05/2015	No	
1.WR	25/05/2016	04/07/2016	5 weeks, 4 days	04/06/2016	04/10/2016	No	
2a.AQ	27/01/2017	13/04/2017	11 weeks, 0 days	13/04/2017	12/04/2019		
2b.HW	19/01/2017	09/05/2017	15 weeks, 4 days	09/05/2017	30/09/2018		
2b.RDT	02/04/2015	09/06/2015	9 weeks, 4 days	08/06/2015	31/12/2015		
2c.CQP	10/06/2015	04/11/2015	21 weeks, 1 days	04/11/2015	31/08/2016		
2c.KPS	08/08/2017	21/11/2017	15 weeks, 1 days	21/11/2017	26/11/2027		
2c.PBA	25/06/2015	11/11/2015	20 weeks, 0 days	16/11/2015	08/01/2016		
2d.CWN	23/07/2015	22/12/2015	21 weeks, 4 days	22/12/2015	21/12/2030		
2d.QM	13/04/2017	28/07/2017	15 weeks, 2 days	28/07/2017	27/07/2020		
2e.BH	26/01/2015	28/05/2015	17 weeks, 4 days	28/05/2015	28/05/2018		
2e.BSD	21/03/2017	21/06/2017	13 weeks, 2 days	10/10/2017	09/10/2027		
2e.GG	31/03/2016	16/06/2016	11 weeks, 1 days	16/06/2016	30/09/2018		
2e.RPW	08/04/2017	13/07/2017	13 weeks, 4 days	01/07/2017	31/10/2019		
3.ASP	21/10/2015	10/06/2016	33 weeks, 3 days	01/06/2016	31/03/2018		Yes
3.GS	15/04/2016	30/09/2016	24 weeks, 1 days	30/09/2016	31/12/2038		No
3.SF	13/04/2017	20/07/2017	14 weeks, 1 days	20/07/2017	31/12/2018		No
3.SSP	10/09/2015	01/09/2017	103 weeks, 2 days	24/08/2017	23/08/2025		Yes

Table A6.3 Case Example Public Register and Supporting Documents

Ref	Public Register Documents	Application Supporting Documents
1.BAS	Application Form Certificate of Non-infection Coroner's Acknowledgement of receipt of notice of intention to remove a body out of England Death Certificate Marine Licence	Certificate of Non-infection Coroner's Acknowledgement of receipt of notice of intention to remove a body out of England Death Certificate
1.BB	Application Form Natural England email correspondence Marine Licence Variation Request 2 Accepted Marine Licence variation 2 Variation Request 3 Accepted Marine Licence variation 3 Variation Request 4 Accepted Marine Licence variation 4 Variation Request 5 Accepted Likely significant effect assessment Marine Licence variation 5	Natural England email correspondence
1.BL	Application Form Self-service Qualifying Responses Marine Licence	Application Form Self-service Qualifying Responses
1.IW	Application Form Specification for The Repair of Bracing and Installation of Cathodic Protection at Imperial Wharf, Gravesend Marine Licence Variation Request 1 Accepted Marine Licence variation 1	Specification for The Repair of Bracing and Installation of Cathodic Protection at Imperial Wharf, Gravesend
1.LF	Application Form Crown Estate email correspondence JNCC email correspondence Environmental Statement and Planning Review Marine Licence	Crown Estate email correspondence JNCC email correspondence Environmental Statement and Planning Review
1.OP	Application Form Environmental Appraisal for Marine Growth Clearance Natural England Pre-application Advice Stop the Spread - invasive species note Marine Licence	Environmental Appraisal for Marine Growth Clearance Natural England Pre-application Advice Stop the Spread - invasive species note
1.WID	Application Form Method Statement Dredge Area Risk Assessment Marine Licence	Method Statement Dredge Area Risk Assessment
1.WR	Application Form Indicative method statement Rev B Marine Licence Variation Request 1 Cancelled	Indicative method statement Rev B
2a.AQ	Planning permission Method Statement Marine Licence	Planning permission Method Statement
2b.HW	Application Form Ecological Assessment	Ecological Assessment

	Marine Licence	
2b.RDT	Application Form Survey data sheet for tracer dye Environmental information Proposed dye release location chart Marine Licence Variation Request 1 Rejected	Survey data sheet for tracer dye Environmental information Proposed dye release location chart
2c.CQP	Application Form Site plan Site photo Flood Defence Consent email Site location Marine Licence	Site plan Site photo Flood Defence Consent email Site location
2c.KPS	Application Form Site location Plan Water Framework Directive Assessment Sample Analysis Results Method Statement Public notice - previous application Consultation response - IFCA Consultation response - Cefas Consultation response - EA Consultation response - Natural England Consultation response - Others (online) Marine Licence	Site location Plan Water Framework Directive Assessment Sample Analysis Results Method Statement
2c.PBA	Application Form Location chart Project background Project details Site photo Method Statement Planning permission Site map Risk Assessment Public notice MCZ Screening Opinion Likely significant effect assessment Marine Licence Variation Request 1 Accepted Marine Licence Variation 1 Variation Request 2 Accepted Marine Licence Variation 2	Location chart Project background Project details Site photo Method Statement Planning permission Site map Risk Assessment
2d.CWN	Application Form Marine Licence	
2d.QM	Application Form Supporting Statement and Water Framework Directive Assessment Proposed elevations Site Location Plan Likely significant effect assessment Consultation response - Natural England Consultation response - Historic England Consultation response - Southampton City Council Consultation response - Others (online) Marine Licence	Supporting Statement and Water Framework Directive Assessment Proposed elevations Site Location Plan
2e.BH	Application Form WFD Assessment	WFD Assessment Dredge Area

	Dredge Area Sample Analysis Results Public Notice MMO email to IOW Council for consultation Consultation response - Trinity House Applicant email to MMO - request for update MMO email to Applicant - update on consultation Marine Licence Variation Request 1 Accepted Marine Licence Variation 1	Sample Analysis Results
2e.BSD	Application Form Sample Analysis Results Marine Licence Variation Request 1 Accepted Marine Licence Variation 1	Sample Analysis Results
2e.GG	Application Form Marine Licence	
2e.RPW	MCMS screen - application hidden from public register Historic England Consent WFD and Nature Conservation Assessment (redacted) Marine Licence Marine Licence Variation 1	
3.ASP	Application Form Proposed site plan Existing site plan Site location plan Marine licence enquiry email Environmental Impact Statement - Readers Guide (Seaton Port Teesside Environmental Reclamation and Recycling Centre Facility) Environmental Impact Statement (Seaton Port Teesside Environmental Reclamation and Recycling Centre Facility) Non-Technical Summary Cofferdam removal execution statement Draft schedule Water Framework Directive Assessment Environmental Statement Addendum Non-Technical Summary Environmental Statement Addendum EIA Consent Decision Report Marine licence Variation Request 1 Accepted Marine licence variation 1 Variation request 2 Open	Proposed site plan Existing site plan Site location plan Marine licence enquiry email Environmental Impact Statement - Readers Guide (Seaton Port Teesside Environmental Reclamation and Recycling Centre Facility) Environmental Impact Statement (Seaton Port Teesside Environmental Reclamation and Recycling Centre Facility) Non-Technical Summary Cofferdam removal execution statement Draft schedule Water Framework Directive Assessment
3.GS	Application Form Supporting Environmental Information Marine licence Variation Request 2 Accepted Marine licence variation 2	Supporting Environmental Information
3.SF	Application Form Report Likely significant effect assessment Consultation response - Crown Estate (email)	Report Likely significant effect assessment Consultation response - Crown Estate (email) Waste Hierarchy Plan

	Waste Hierarchy Plan Marine Licence Dropped Incident report pro forma Public notice Consultation response - Natural England Natural England advice Consultation response - IFCA Consultation Reponses - online Marine licence Variation Request 1 Accepted Marine licence variation 1	Marine Licence Dropped Incident report pro forma
3.SSP	Application Form Environmental Statement vol 1 report Environmental Statement vol 2 Appendices Further Information for Planning Application and Marine Licence MCZ Assessment Marine Licence	Environmental Statement vol 1 report Environmental Statement vol 2 Appendices Further Information for Planning Application and Marine Licence

Table A6.4 Case Example Additional Consents

Ref	Additional Consents (Y/N)	Additional Consents
1.BAS	No	
1.BB	No	
1.BL	No	
1.IW	Yes	Harbour Works Licence Environmental Permit
1.LF	No	
1.OP	No	
1.WID	Yes	Harbour Works Licence
1.WR	Yes	Harbour Works Licence Environmental Permit
2a.AQ	Yes	Planning Permission
2b.HW	Yes	Planning Permission Flood Defence Consent
2b.RDT	No	
2c.CQP	Yes	Flood Defence Consent
2c.KPS	No	
2c.PBA	Yes	Planning Permission
2d.CWN	No	
2d.QM	Yes	Planning Permission Harbour Works Licence
2e.BH	Yes	Harbour Works Licence
2e.BSD	No	
2e.GG	No	
2e.RPW	Yes	Protection of Wrecks Act Consent
3.ASP	Yes	Planning Permission
3.GS	Yes	Section 36 Consent under Electricity Act 1989
3.SF	No	
3.SSP	No	

Table A6.5 Case Example Formal Consultation Responses

Ref	Formal Consultation Body	Response (Y/N)	Comments
1.BAS			
1.BB			
1.BL			
1.IW			
1.LF			
1.OP			
1.WID			
1.WR			
2a.AQ			
2b.HW			
2b.RDT			
2c.CQP			
2c.KPS	Cefas	yes	Change to reference of disposal site requested
	CE	yes	Consent required
	EA	yes	No objection
	HE	No	No objection
	IFCA	yes	No objection
	MCA	yes	No objection
	MMOLO	yes	No objection
	MoD	No	No objection
	NE	yes	No objection
	RYA	No	No objection
	TH	yes	No objection
2c.PBA	EA	Yes	No objection
	LA	Yes	No objection
2d.CWN	CE	yes	Consent required
	EA	yes	No objection
	HA	yes	No objection
	HE	yes	No objection
	LA	yes	Planning permission granted
	MCA	yes	Proposed conditions - No objection
	MoD	yes	No objection
	NE	yes	Advice in relation to SSSI and proposed conditions
	RYA	yes	No objection
	TH	yes	No objection
2d.QM			
2e.BH	LA	No	
	TH	yes	No objection
2e.BSD			
2e.GG			
2e.RPW			
3.ASP	CE	yes	unknown - no details provided
	EA	yes	unknown - no details provided
	HA	No	
	HE	yes	unknown - no details provided
	IFCA	yes	unknown - no details provided
	LA	yes	unknown - no details provided
	MCA	yes	unknown - no details provided
	MMOLO	yes	unknown - no details provided
	MoD	yes	unknown - no details provided
	NE	yes	unknown - no details provided
	RYA	yes	unknown - no details provided

	TH	yes	unknown - no details provided
3.GS			
3.SF	CE	Yes	Content that full removal is not technically possible so withdraws earlier concerns
	EA	yes	no objection
	IFCA	yes	No objection
	MCA	yes	Standard conditions requested
	MMOLO	yes	no objection - comments of heavy use of area for fishing and pleasure
	NE	yes	No LSE
	RYA	yes	Notice to mariners requested
	TH	yes	Standard conditions requested
3.SSP			

Key: Cefas = Centre for Fisheries and Aquaculture Science; CE = Crown Estate; EA = Environment Agency; HA = Harbour Authority; HE = Historic England; IFCA = Inshore Fisheries & Conservation Authority; LA = Local Authority; MCA = Maritime & Coastguard Agency; MMOLO = MMO Local Office; MoD = Ministry of Defence; NE = Natural England; RYA = Royal Yachting Association; TH = Trinity House

Table A6.6 Case Example Informal Consultation

Ref	Informal Consultation (Y/N)	Consultation Body
1.BAS	No	
1.BB	Yes	Natural England
1.BL	No	
1.IW	Yes	MMO Licensing Team
1.LF	Yes	British Geological Survey Cefas Crown Estates JNCC
1.OP	Yes	Natural England
1.WID	Yes	Harbour Authority
1.WR	Yes	Environment Agency MMO Licensing team Harbour Authority
2a.AQ	Yes	MMO Local office
2b.HW	No	
2b.RDT	No	
2c.CQP	Yes	MMO Licensing team Harbour Authority
2c.KPS	Yes	MMO Licensing Team
2c.PBA	Yes	Canoe and Kayak Club Environment Agency Local Fisheries Local MP, MEP, Cllr. Local Residents Local Sailing Club MMO Licensing team Natural England Other local stakeholders
2d.CWN	Yes	Historic England MMO Licensing team
2d.QM	No	
2e.BH	No	
2e.BSD	Yes	MMO Licensing team
2e.GG	Yes	MMO Licensing team
2e.RPW	Yes	Unknown (applicant responded ‘yes’ to informal consultation question but no further details)
3.ASP	Yes	MMO Licensing team
3.GS	Yes	Natural England
3.SF	No	
3.SSP	Yes	MMO Licensing team

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Appendix 7. Goodwin Sands Direct Consultation Advisor Comments

Key:

	No Objection
	Minor Objection mitigated through licence conditions or additional clarification
	Major Objection

Organisation	Remit/Reason for Consultation	Consultation Representations		
		Round One	Round Two	Round Three
Centre for Fisheries and Aquaculture Science (Cefas)	Physical processes; benthic ecology; fish and commercial fisheries; and underwater noise	Approve, with minor observations	No particular concerns, minor observations. Some clarification sought from MMO	
Department for Transport	Transport	No comments		
Dover District Council	Local planning	No objections raised	No objections raised	
Environment Agency (EA)	WFD and migratory fish	Refuse. Deficiencies in WFD assessment	ES addendum addresses concerns regarding WFD – no further objections	No objection
Historic England (HE)	Historic Environment	Refuse. ES addendum required to address potential marine heritage impacts.	Refuse. Substantial inadequacies in the assessments remain(GS14.11)	Recommends that a licence is not issued due to known and unknown historic environment receptors
Kent & Essex Inshore Fisheries and Conservation Authority (IFCA)	Local Fisheries	Further assessment requested regarding impacts to fish species		Continued fisheries liaison required, but otherwise no objection to licence
Kent Wildlife Trust	Natural environment	Refuse. Direct loss of rMCZ habitat	Continued objection	Continued objection
Maritime and Coastguard Agency (MCA)	Navigation	No objection to consent. Standard conditions required on ML	No objection to consent. Suggested conditions provided	No objection to consent. Suggested conditions provided
MMO Local Office	Commercial fishing; Fish/shellfish	No major concerns	No further comments	No further comments

	stocks; Local awareness; Interference with other users of the sea			
Natural England (NE)	Natural environment, protection of sites and species/aquaculture	Recommended changes to ES and recommended licence conditions	Generally supportive, with some request for further clarification regarding the Preliminary Environmental Monitoring Plan (PEMP)	Requests sight of PEMP, but states no objection to granting licence
National Federation of Fishermen's Organisations (NFFO)	Commercial fishing	Recommended licence conditions regarding fisheries liaison plan		
Thanet Fishermen's Association	Commercial fishing	Refuse. Incomplete fisheries data within ES	Disappointed at lack of clarification requested regarding commercial fishing impact. Original objection remains.	Additional information still hasn't mitigated or reduced objection.
The Crown Estate	Landowner	No objection		
British Sub-Aqua Club	Recreational diving		Refuse. Concerns over impact to archaeological heritage	Refuse. Previous heritage concerns not being addressed
Joint Casualty and Compassionate Centre (JCCC)	Military activity and historic environment		Refuse. Very high risk of uncovering and permanently damaging military aircraft remains	Consulted on Protection of Military Remains Act 1984 consent. Removes objection to licence as anomalies are not indicative of aircraft of vessels
Kent County Council	Local Planning		Object on historic environment grounds but defer judgement to Historic England.	Maintains previous comments

			No other cause to object.	
Royal Yachting Association (RYA)	Recreational sailing		No objections. Request for action to ensure navigational safety	
Trinity House	Navigation		No objections. Standard conditions required.	No objections. Standard conditions required.
Data sources: GS4; GS14; GS28. Remit descriptions from GS43				

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Appendix 8A. Description of Goodwin Sands 'Existing Environment'

Marine Licence Environmental Statement Non-Technical Statement

Existing Environment Category	Description of Goodwin Sands
5.1 Nature Conservation Designations (see Figures 8.2 and 8.3)	The proposed dredge area is not located within any internationally designated sites (i.e. Special Areas of Conservation (SACs), Special Protection Areas (SPAs), or Ramsar sites).
5.2 Physical and Chemical Environment 5.2.1 Coastal Processes and Hydrodynamics	Goodwin Sands is a series of north-northeast to south-southwest oriented shallow sand banks (e.g. South Calliper, the Downs) separated by elongate areas of deeper water (e.g. Kellet Gut). Goodwin Sands shallow geology comprises Cretaceous Chalk overlain by either Recent (i.e. Holocene) sands (i.e. the Goodwin Sands) or an intermediate channel infill overlain by the Recent sands. Goodwin Sands is dynamic and changes its shape in response to changes in tidal currents and waves. Seabed sediments within Goodwin Sands are almost exclusively sand, with very little gravel or mud.
5.2.2 Marine Water and Sediment Quality	Goodwin Sands and the wider study area is situated within the Kent South Coastal Water Body (GB640704540001)
5.3 Biological Environment 5.3.1 Benthic Ecology	Goodwin Sands is a dynamic area of sandbanks with areas which are regularly exposed at low tide. The proposed dredge area is characterised as infralittoral fine sand, including infralittoral mobile clean sand with sparse fauna. The proposed dredge area overlaps with the Goodwin Sands rMCZ. The recommendation for a MCZ at Goodwin Sands includes the habitat Features of Conservation Importance (FOCI) for rossworm reef and common (blue) mussel beds.
5.3.2 Fish Ecology	The Goodwin Sands area has been identified as a potentially important habitat for sandeel.

	The proposed dredge area at Goodwin Sands has been identified as a spawning and/or nursery ground for a number of fish species
5.3.3 Marine Mammals	The results of the ZSL [Zoological Society London] surveys indicate that Goodwin Sands is an important haul-out site for grey seals in the region.
5.3.4 Ornithology	The proposed dredge area is not situated within any designated areas for bird habitats and/or species. It is situated approximately 7.1km from the nearest coastal SPA and Ramsar site The majority of the proposed dredge area falls within the extensive boundary of the Goodwin Sands rMCZ
5.4 Human Environment 5.4.1 Commercial and Recreational Navigation	The nearest anchorage to Goodwin Sands is around Trinity Bay, immediately to the west of the proposed dredge area. This location provides sheltered anchorage for large draught vessels. There are three anchorages situated further west of Goodwin Sands around The Downs. The anchorages and the Trinity Bay anchorage provide a waiting area for ferry traffic in the event of the Port of Dover being closed. A range of recreational vessels use the waters surrounding Goodwin Sands, most notably charter boats (for sea angling, diving and site-seeing tours) and yachts (for sailing and cruising). Defra report that approximately 82 recreational fishing charter boats operate in the Southern North Sea region covered by ICES rectangle 27IVc.
5.4.2 Commercial and Recreational Fisheries	Not present
5.4.3 Archaeology and Historic Environment	Goodwin Sands represents a major hazard to marine navigation and, as such, has perhaps the highest density of recorded shipping losses in the UK. Many of the most important trade routes of northern Europe pass close to Goodwin Sands, which are located offshore of the Downs, formerly one of the most important commercial and naval anchorages off the English coast. It has been estimated that over 800 shipwrecks have been documented on Goodwin Sands.

5.4.4 Other Commercial and Recreational Activities (see Figure 8.4)	Subsea Cables There are a number of subsea cables in the vicinity of the proposed scheme The approximate positions of two historic telecommunications cables are also charted at 1km and 2km to the south of the proposed dredge area, running east to west across South Goodwin Sands. Scuba Diving Goodwin Sands and the surrounding area hold a large number of wrecks and are visited by recreational scuba divers. The area between Goodwin Sands and the shipping lanes to the east also contain a number of popular wrecks frequently visited by divers and diving organisations.
5.4.5 Coastal Protection and Flood Defence (see Figure 9.5)	The Goodwin Sands sand banks provide protection to the Kent shoreline between South Foreland in the south and Ramsgate in the north.
Data Source: GS3.1, pp8	

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Appendix 8B. Missing Battle of Britain Pilots over Goodwin Sands

Battle of Britain Missing pilots 1940 – Goodwin Sands area			
Date	**Aircraft**	**Unit**	**Details**
27/05/1940	Messerschmitt Bf110	2(F)122 TBC	Crew missing (off Kingsdown/Deal – Goodwin Sands area)
28/05/1940	Bristol Blenheim	235 Squadron	Crew safe
29/05/1940	Avro Anson K8771	48 Squadron	Crew safe
29/05/1940	Bristol Blenheim 1F L9260	235 Squadron	Crew safe
29/05/1940	Bristol Blenheim IV L9397	235 Squadron	Crew killed
29/05/1940	Spitfire N3289	610 Squadron	Flying Officer Kerr-Wilson, missing
29/05/1940	Avro Anson 1 K8773	48 Squadron	Crew safe
31/05/1940	Spitfire N3274	610 Squadron	Flying Officer G L Chambers, missing
01/06/1940	Bristol Blenheim ‘A’	254 Squadron	Crews missing/killed. One survivor remaining between ‘A’ and ‘O’ below.
01/06/1940	Bristol Blenheim ‘O’	254 Squadron	Crews missing/killed. One survivor remaining between ‘O’ and ‘A’ above.
01/06/1940	Bristol Blenheim NOT KNOWN	254 Squadron	Crew missing
02/06/1940	Bristol Blenheim L9476	53 Squadron	Crew safe. Forced landing on Sands
08/07/1940	Spitfire K9907	65 Squadron	Squadron Leader Desmond Cooke (26009), missing presumed dead.
09/07/1940	Messerschmitt Bf 109E	Seenot Fleig Mission	Pilot missing
09/07/1940	Messerschmitt Bf 109E	Seenot Fleig Mission	Pilot missing
20/07/1940	Hurricane I N2670	32 Squadron	Fleet Air Arm Sub Lt. G.G.R. Bulmer, drowned – shot down by

			a Bf 109 of JG 51 off Dover at 18:00 hrs.
23/07/1940	Junkers JU88A	4(F)122	Lt Forster and crew missing
25/07/1940	Spitfire R6707	54 Squadron	Flt. Lt. B.H. “Wonky” Way, presumed drowned. Shot down by Bf109 and crashed into channel.
28/07/1940	Spitfire P9547	74 Squadron	Pilot Officer J H R Young, killed. Shot down in the Channel off Ramsgate near the Goodwin Sands by a Bf 109, possibly Oberleutnant Muncheberg of III/JG26.
29/07/1940	Spitfire N3038	41 Squadron	Flying Officer D.R. Gamblen, missing following combat with Ju87s and Bf109s.
06/08/1940	Messerschmitt Bf110	V/LG1	Crew missing
12/08/1940	Hurricane P3803	501 Squadron	F/O K. Lukaszewicz (Polish), missing following a combat with enemy fighters west of Ramsgate.
12/08/1940	Messerschmitt Bf109E	111/JG 54	Gefr Stabwer TBC
12/08/1940	2 x Messerschmitt Bf109E	JG 54	Both pilots missing (Goodwin Area)
14/08/1940	2 x Messerschmitt Bf109	4/JG 52	Both pilots missing (Deal area)
15/08/1940	Dornier Do172	6/KG3	Crew safe
15/08/1940	Hurricane I V7410	151 Squadron	P/O M Rozwadowski, missing after combat with Bf109s, Deal/Dover area.
16/08/1940	Spitfire K9915	65 Squadron	P/O Lee L Pyman, shot down and killed at 1730hrs over the Channel near Deal, after combat with Bf 109s that had just attacked RAF Manston.
22/08/1940	Spitfire R6708	54 Squadron	Sergeant G R Collett, killed after dogfight with enemy fighters off Deal.

24/08/1940	Hurricane P3141	51 Squadron	Pilot Officer P Zenker (Polish) missing (in area of the Goodwin Sands) after pursuit of enemy aircraft.
24/08/1940	Junkers JU88A	Stab 11/KG76	3 crew missing, 1 killed
			Uffz Meier, Fw Flessner and Fw Vetter missing
24/08/1940	Junkers JU88A	5(F)122	3 crew missing Lt Hellermann, Lt Hurck
24/08/1940	Junkers JU88A	4/KG76	3 crew missing, 1 killed Uffz Duos, Freimann and Froba
24/08/1940	Junkers JU88A	4/KG76	3 crew missing, 1 killed Lt Grell, Uffz Wetzker and Fw Thomas
24/08/1940	Junkers JU88A	11/KG76	3 crew killed, one missing
24/08/1940	Junkers JU88A	111/KG51	1 crew killed, 2 missing, 1 POW
25/08/1940	Hurricane P2755	32 Squadron	Pilot Officer K R Gillman, missing (North East of Dover)
26/08/1940	Dornier Do172	7/KG3	1 killed, 2 missing, 1 POW, Uffz Ram, Ober Fr Knochenmuss
26/08/1940	Dornier Do172	7/KG3	1 killed, 2 missing, 1 POW, Uffz Reinhard and Uffz Ritzel missing
28/08/1940	Spitfire R6751	603 Squadron	Flt Lt J L G Cunningham, missing after combat over Dover.
31/08/1940	Dornier Do17 w/No 3414	5/KG3	1 killed, 3 POW
02/09/1940	Messerschmitt Bf110 D w/No 3197	11/2G2	2 crew missing, Uffz Denker and Uffz Krapp.
07/09/1940	Messerschmitt Bf110 C-4 w/No. 3570	11/2G2	1 killed, 1 POW.
15/09/1940	Dornier Do172	8/KG2	1 missing
15/09/1940	Dornier Do172	5/KG3	1 missing
15/09/1940	HEINKEL HE111	111/KG53	Crew killed
15/09/1940	Dornier Do172	5/KG3	1 missing
19/09/1940	Junkers JU-88A-1 w/No 7058	1/KG51	2 killed, 2 missing, Fw Walter and Gfr Roeder.
19/09/1940	Junkers JU88A-1	1/KG51	Crew missing 3 miles off Deal
23/09/1940	Messerschmitt Bf109E w/No. 6304	7/JG3	Uffz K Evsing, POW

24/09/1940	Bristol Blenheim 1V T1794	139 Squadron	Crew missing, Squadron Leader M G Hendry, Sergeant Arrowsmith and Sergeant Davidson.
30/09/1940	Dornier Do172	8/KG3	5 crew missing. Fw Bauer, Fw Salomo, Fw Schierling, Fw Schonn, Uffz Schroff
06/10/1940	Dornier Do172	KG3?	4 crew missing (off Kingsdown in Goodwin Sands area)
10/10/1940	Messerschmitt Bf109E w/No 4143	4/JG53	Oblt Vogel missing
11/10/1940	Messerschmitt Bf109E w/No 6267	5/JG27	Safe
15/10/1940	Junkers JU88A	1/LG1 ?	4 crew missing (evidence says 3 miles off Kingsdown in area of Goodwin Sands)
25/10/1940	Junkers JU88A	111/KG77	Crew killed
25/10/1940	Junkers JU88A	111/KG77	4 crew missing
01/11/1940	Messerschmitt Bf109E		Off Ramsgate/ Goodwin Sands
14/11/1940	Junkers JU87B	9/STG1	1 killed, 1 missing